

Cadres, Gangs and Prophets:

The Commodity Futures Markets of China

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Abstract

In China's market reforms, the emergence of commodity futures markets marked the way in which the country took up more sophisticated components of capitalist markets. Based on seven months of ethnographic fieldwork in 2005, this thesis is the first ethnography conducted in the commodity futures markets of China. It provides field records of the relationship between state structures, quasi-public organisations and the private sector in a post-Communist market. It shows how social groups align to form capital factions, and how these factions attempt to calculate the actions of each other. It also provides an account of how knowledge is circulated, and how reputation, authority and expertise are developed within the markets.

The author argues that the notion of "performativity" can be applied to the case of Chinese futures markets. The consensus held by market actors and their subsequent actions are a major contribution to market reality. In the context of Chinese markets, political power plays a particularly crucial role - it links up a politicized feedback loop between perception, action and reality.

The thesis applies the concept of technology transfer to assess whether futures markets have an inherent "script" that unfolds and is implemented under different social, cultural and political contexts. Relaxing assumptions held by neoclassical economists (such as individualized rationality), the author believes that the feedback loop of knowledge, action and reality is the "vanilla core" of markets. One of the key factors in success in market construction is the successful implementation of such feedback loops.

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Declaration

Except where specific reference is made to other sources, the work contained in this thesis is the original work of the author. It has not been submitted, in whole or in part, for any other degree.

Date: 4 January 2008

Signature:

Lucia Leung-Sea SIU

To my parents

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Chapter 1

Introduction

“The current Chinese generation is more money-minded. Without the respect for gods and spirits there is no fear; without the Confucian ethics of *Li* and edification there is little sense of conscience or shame; unconstrained by the rule of law there is corruption...” (Lang 2005, my translation) The harsh critique from the professor of finance Larry Hsien Ping Lang in 2005 sparked off a nation-wide controversy. It is disputable whether social order in contemporary Chinese societies has actually undergone complete erosion to the extent as Lang has described. Nonetheless, it cannot be denied that markets have brought crucial social changes to contemporary Chinese societies.

In Beijing 2005, given the rapid momentum of social and economic change in the past three decades, there was a commonly-found sentiment for aspiring urban Chinese to check out how well they were doing by international standards. These ranged from how much money they earned, how well they governed and managed their companies, how much they knew about refined leisure life, how well they ran their municipal transport systems, and how well their social manners were. Resenting their previous seclusion from the world from the 50s to the 70s, people were eager to enter a more open world and look for a new position on the “world stage”. However in China’s futures industry, the question “how is our market different from markets of other places?” went beyond self assertion to matters of survival. The futures industry of China in 2005 was experiencing a period of slowdown after the rapid growth of 2003-04 (see Fig 3.2). When talking in private, many futures traders and brokers described a common frustration that their industry had been under tight policy control since 1998, hence greatly restricting their personal career development. On the third day of my fieldwork, a futures broker burst into tears in an interview, “At first I thought our industry will fly higher than the rest. But where am I now?”

Still standing in the old place... I am a man who has a family to support. I can't wait forever... I've been working in the industry for seven years, seeing lots of friends in other professions – stock brokers, shop owners, anything – getting rich. Overall our country is really taking off... Well, I still believe in futures. Eventually this industry will prosper when the policies come, but when? I don't have many more seven years to waste.” On the first contact with field subjects in May 2005, this broker and others opened my eyes to see one important meaning of markets: they are a mechanism to allocate and redistribute economic wealth. The makeup of markets and the events happening there matter, because they have a direct impact on people's lives.

This research explores what makes a post-Communist market work. China's modern commodity futures markets exhibit features of globalised “flow structures” of capital and information, yet they are also embedded by the local political, social and cultural environment. Political power can be exchanged, alongside with money and tangible commodities. The modern face of *guanxi* (關係, the Chinese word for social relationships, pronounced as “guan-shee”) networks¹ resides within the investor community. Instead of rational and calculative individuals, investors often behave in gang-like aggregates, demonstrating non-quantifiable attributes (political, geographical, industry) of aggregate money. How humans, information flow and decision tools constitute configurable pathways of signals and actions. The use of chartism, trust in the state, and trust in the masses prevail, but the cognitive heuristics are highly subject to reconfiguration. The fieldwork is based on seven months of ethnographic fieldwork over six cities in China in 2005. The fieldwork was conducted in a market not yet open to foreign capital. It included two internships, three training courses, three industry conferences, and 36 interviews (Appendix 1).

¹ The word *guanxi* can be applied to kinship, friendship, working relationships, or remote acquaintances in general. It is often associated with an elaborate exchange system of gifts, favours and banquets, such that its articulation and application is considered to be an art and a separate area of study, *guanxixue* (關係學, the study of *guanxi*) (Yang 1994: 1-6).

1.1 Context of the Markets

Social life in China had undergone enormous changes since the Dengist economic reforms in 1978 (Liew 1997:2, Brahm & Li 1996:3). Money was an important theme that had brought dramatic transitions in material consumption, interpersonal relationships, cultural values and socio-political institutions in the recent three decades.



Fig 1.1 Faithful believers worshipping at the shrine of the money god *Cai Shen* with gigantic incense sticks on Qingyan Shan.

Field subjects talked a lot about new hopes and fabulous opportunities in the new markets. However, they were also coping hard with the loss of social security, waning mutual trust between neighbours, and emergent pressure of life from a competitive social environment. In 2005, the pursuit for money was no longer a political taboo or an ethical flaw. The love of money, once unleashed, could be

intense and publicly displayed. During fieldwork I had taken a weekend trip to Qingyan Shan (Green Rock Mountain, 青岩山) in Liaoning, and witnessed that the folk deity *Cai Shen*² (財神, the god of money) was worshipped with renewed fervour. A field subject and I started to climb the mountain at 5:30am on a Sunday, and reached the shrine of *Cai Shen* midway up the hill at 7am. Hundreds of faithful were already swarming to worship at the shrine. Along the mountain trail there were merchants and hawkers selling items for religious offering. A popular rhyme chanted by the merchants was: “tall incense sticks for the money god” (*bai Cai Shen, shao gao xiang* 拜財神，燒高香). Every triple pack of gigantic incense sticks cost 20 yuan, which was more than 2.5% of the local people’s average monthly income. Yet their business was extremely good – the desire for money and the folk belief in *Cai Shen* were so strong that at Qingyan Shan, a small market of religious offering had been established. Fig 1.1 is a picture I took at the shrine with some difficulty – it was hard to find a photo point without being hit by the burning sticks!

Amongst an infinite set of researchable phenomena in the economic transition, China has started out as a Communist country with a planned economy in 1978, yet in the 1990s futures traders were already skilfully speculating abstract contracts of commodity prices in the future. The changes were never smooth, as China’s commodity futures markets had experienced a process from “big bang” to rapid consolidation within a short period of eight years (1991-98). The number of commodity futures exchanges grew from one to an explosive sixty, was slashed down by regulatory authorities to fifteen, and then cut down further to three. The emergence of derivative markets is interesting because financial and commodity exchanges are situated at the heart of the capitalist economy. They can be seen as fetish social structures that extract capital from society (Geras 1971, Hertz 1998:25) to amplify the movement and redistribution of capital and material wealth.

² The origin of *Cai Shen* is controversial. Many refer to the deified ancient folk heroes Zhao Gongming (趙公明) or Bi Gan (比干), but there are other versions and legends from different geographical areas.

Derivatives are financial tools with a higher level of abstraction, and have amplified effects in the leverage of capital. By studying how a “hardcore” component of capitalism is introduced and implemented in a post-Communist country, the case study illustrates the integration and tension between planned economy and market economy; and the tension between global markets and native/local experience (Hertz 1998: 4-11).

1.2 Academic Objectives

This research originates from three theoretical perspectives. Firstly, I was fascinated by the idea of “performativity” from science studies (Callon 1998, MacKenzie and Millo 2003, MacKenzie and Muniesa et al 2007; see also “performativists” in chapter 2). After writing a masters dissertation about the dotcom bubble of Hong Kong (Siu 2002), I inclined to see markets as logic arrays made up of humans and non-humans, where the “arrays” were subject to the configuration and re-configuration by ideologies, public opinions, policies, media discourses, and professional practices. Under this perspective, there is a pathway of feedback between speech (knowledge), actions (economic activities), and social reality. Some relevant works in science studies include markets as experimental devices (Callon & Muniesa 2003), a cyborg structure (Mirowski 2002), a circuit of cognitive feedback loops (Barnes 1983), and a network of actors, power and artefacts (Hughes 1993). Before setting out for fieldwork, I was making rough work sketches about metaphorical “logic gates” in the financial markets – that the logic flow of most derivative products in the markets can be represented by corresponding digital logic circuits (see Appendix 3). Viewed from the work of the “performativists”, it seemed that it was possible to construct markets based on speech-acts and the circulation of knowledge, especially if a significant proportion of the market population could be convinced. An initial plan of this research was to conduct ethnography in a young derivative market to understand what the required conditions for market construction were, with special focus on the issues of configuration, feedback, and performativity.

A second perspective arises from the concept of technology transfer (Akrich 1992) from science studies, and the concept of social embeddedness in economic sociology (see “embedded sociologists” in chapter 2). The market structure can be compared with a technological artefact. When this object is transferred from its original context of creation and use, and “transplanted” as a “black-box” to a different environment, new connections and meanings have to be established between the object and its new social surroundings, before the market structure can start functioning and serve its purposes. When a derivative market structure is deployed to a new country, one research question is to explore whether there is something inherent or hardwired in the “market script” itself – economic theories, trading rules, institutional arrangements, ideologies, rationality, or technologies – that can trigger some self-aligning and path-dependent processes. Another point of research interest is to take note of how markets are aligned with local networks, organisations, political environment, and culture. By investigating these processes of alignment, adjustment and modification, markets are understood in the context of their particular social embedding environment, instead of a set of universal mechanisms.

A third academic purpose of this research is to provide ethnographic data from the field. Financial markets and analogous commodity futures markets are a relatively new area to science studies and sociology of knowledge. Up till now only a limited number of ethnographic studies have been conducted in real-life market scenarios (including Abolafia 1993, Beunza & Stark 2002, Calyskan 2004, Hertz 1998, Knorr Cetina & Brügger 2002, Lépinay 2002, Miyazaki 2007, Muniesa 2002, and Zaloom 2005), a majority of them done in the US. There are several books written on the futures markets of China from standpoints of investment, professional practice, and legendary fictions; but none of them have taken a standpoint from sociology. One way to make contributions to the fields of social studies of finance, as well as studies of the economy of contemporary China, is to provide empirical data from the field, which is rare.

1.3 Thesis structure

For the ethnographer, there are always more events happening in the field than one can actually put down in a thesis. As a writer and narrator, I can only make my best effort to make the selection and present the data in a structured way. Chapter 2 is a literature review of relevant schools and theories; Chapter 3 is a historical summary of commodity futures markets in contemporary China from the 1820s to 2007; Chapter 4 is a discussion on methodology issues, with emphases on issues such as access, orientalism, and cultural essentialism. Chapters 5, 6 and 7 are the core finding chapters. Chapter 5 is the “cadre chapter”, which is about state structures and quasi-state structures in the markets. Chapter 6 is the “gang chapter”, which discusses the properties of social networks within the investor community. Chapter 7 is the “prophet chapter”, which discusses issues of knowledge, decision tools and rationality in the markets. Chapter 8 is a short chapter on a technology shift in the markets, and how it is associated with gender and employment issues in the futures industry. Chapter 9 is the conclusion chapter.

Chapter 2 Literature Review

Markets are intense hubs where money, commodities, power and social relationships enter active interplay. In the last century economics has occupied a central and dominant academic position to explain what markets are, but there is a revival of social scientists from non-economic disciplines in the last two decades to provide alternative perspectives and standpoints. This chapter will trace several disciplinary perspectives of what markets are, including classical sociology, neoclassical economics, institutionalists, behavioural finance, embeddedness sociologists, cultural substantivists, and performativists. Then the discussion will proceed to existing ethnographic work on markets, perspectives from China studies, and the contextual background of commodity futures markets in China.

2.1 Classical Sociology

Early sociologists saw money and exchange as an integral part of society and history. According to Marx, markets are part of the mechanism in which capital extracts surplus value from production. In the process of exchange, the production value and use value of commodities are abstracted into a language of equivalents, which becomes the exchange value. The ultimate value is represented by the fetish symbol of money (Marx 1946[1887]:35-82). Simmel emphasized that in the process of abstraction, commodities and money have swapped places in the human consciousness. Money used to be a means to obtain commodities in early societies; in modernity money becomes an ultimate goal *per se*, while commodities are realigned as the means and subsequent benefits of money only (Simmel 1990 [1900]). Weber analyzed the rise of capitalism from the viewpoint of protestant Christian ethics. Although modern markets operate upon principles of rational calculation, the religious and moral backdrop of western civilizations was seen by him as essential for the accumulation of capital, as well as the availability of labour forces in large scale (Weber 1958).

2.2 Neoclassical Economics

From the 1880s onwards, the study of markets (supply, demand, prices and utility) is disembedded from other “non-market” social science disciplines. The trend can be attributed to a positivist view of markets – the perspective that a model similar to classical mechanics can be established between supply and demand. This model operates like a frictionless model; it can automatically adjust itself according to supply and demand, irrespective to contexts (Lie 1991, Mirowski 1989, Swedberg 1987). The more recent political ideology that is sometimes called neoliberalism stems from this universalist perspective: unfettered markets are more efficient, rational and desirable than government control or protectionism; and markets should be left to arrive at a spontaneous and rational equilibrium. The impact of universalists was marked by the Chicago School led by Milton Friedman; policies of political leaders such as Margaret Thatcher, Ronald Reagan, and Augusto Pinochet in privatisation, deregulation and free trade (Harvey 2005); and development think-tanks such as Hernando de Soto (Mitchell 2007).

2.3 Institutional Economics

The old institutional economists in the 1920s differed from neoclassical economists in their objects of study and their methods. They focused on institutions as essential structures to mediate market forces: Thorstein Veblen proposed an evolutionary view of economic institutions, and incorporated social motives into considerations; Wesley Mitchell studied business cycles; John Commons wrote about industrial relations and the legal foundation of markets (Witte 1954). As a contrast to neoclassical economics, the approach of these old institutional economists was inductive rather than deductive, descriptive rather than analytic (Velthuis 1999). With the dominance of neoclassical economics in the mid 20th century, institutional economics was not prominent for several decades. It was only after the 1980s that a branch of new institutional economics emerged, represented by researchers such as Ronald Coase, Douglass North and Oliver Williamson. They depart from the

evolutionary approach of Veblen (Gruchy 1978), and turn their attention to transaction costs and asymmetrical information.

Institutional economics and economic sociology potentially have a lot of common ground, yet communication between the two sides broke down in the 1930s – 50s in part due to the hostility held by sociologist Talcott Parsons towards institutional economics (Granovetter 1990, Velthuis 1999). Parsons supported the approach of analytic abstraction in neoclassical economics, and he was highly critical of Veblen and institutional economics. For Parson, institutional economics transgressed the disciplinary boundary that he was trying hard to maintain: that sociology should study the “ultimate ends” and economics should study the “means”, as proposed by Lionel Robbins (Velthuis 1999:630). Social institutions, as held by Parsons, belong to the subject area of sociology (Coleman 1991). The gap between neoclassical markets and non-market is also widened by Eugene Fama’s efficient market hypothesis (EMH) in the 1960s.³ By stating that all available information is already incorporated into price, “non-market” factors such as institutions, psychology and culture can hardly add further knowledge to future price movements. The application of institutional economics, psychology and sociology on financial markets is further marginalised from the academic mainstream of economics and business.

Both institutional economics and economic sociology have been revamped after the 1980s, and both take a more aggressive position against neoclassical economics. However, their demarcation ascribed from the time of Parsons still persists. The heterodox approach of institutional economics (the study of complex

³ The Efficient Market Hypothesis stated that in a rational and efficient market, information is quickly and efficiently reflected by the market price. It implies that the study of information (price data and “non-market” factors alike) can hardly add any further knowledge to price movements in the future. The hypothesis comes in weak, medium to strong forms, specifying different scopes of information being “efficiently reflected”.

interactions between social and economic institutions) and the study of social institutions by economic sociologists (such as the work of Neil Fligstein) may actually have more in common to share than both sides have anticipated.

2.4 Behavioural Finance

Since the 1980s mainstream finance theories from the neoclassical school (Fama's efficient market hypothesis, and the theory of indifference from Miller & Modigliani) fail to fully explain real life crises in financial markets. For example during the dotcom bubble in 1995-2000, the markets rose to unprecedented optimism. In 1998, the exchange rate crisis in Thailand and Indonesia spread to some other East Asian economies where economic fundamentals were healthy. In these dramatic events the markets do not fully fit into the analytic and deductive pictures of mainstream financial theories. Neither are investors independent or rational, nor the prices of securities convergent towards an "intrinsic value". The power of computers and equations may even have indirect contributions to market crashes, e.g. the strategy of arbitrage of the Long-Term Capital Management (LTCM) in 1998 (MacKenzie 2001). Such "anomalies" served as Motley fools in a seamless world of rational order, mocking at the frictionless models of neoclassical economics.

After the bust of the dotcom bubble in 2000, disenchanted investors tried to seek for explanations of what they have experienced from psychology and sociology. Best-sellers in bookstores were about collective behaviour, greater fool theory, cascades, herding, imitation, rumours, and the Dutch "tulip mania" in the 17th century where tulip bulbs were speculated to extreme prices (Mackay 2002). Major works of behavioural finance moved from academic margins to the centre of the stage, including Kahneman & Tversky (1979) on psychological patterns of investors; DeBonbt & Thaler (1985) on overreactions on financial markets; Shefrin & Statman (1985) on behavioural aspects of portfolio management; and Shiller (2000) on irrational exuberance. Kahneman was awarded a Nobel Prize in economics in 2002 for his work in psychology on framing and heuristic-based bias.

By seeing markets as made up of humans with psychological properties, behavioural finance serves to introduce an empirical and social dimension into mainstream economics, complementing the analytic and deductive view of neoclassical economics. Boom and bust, contagion, herding, overtrading, and risk aversion are seen as irrational behaviour of humans in the markets. Behavioural finance serves to provide explanations that fill in the discrepancy between neoclassical economic theories and empirical market phenomena.

Members from behavioural finance often position themselves as alternatives to mainstream finance theories. Ironically, their work may actually defend rational calculation as the orthodox foundation how markets should operate. By perceiving psychological and social factors as “bias”, “mistakes” and “noise” that should be eliminated, they are denying these elements from being legitimate and integral properties of the markets. Shefrin (2000) wrote in his book *Beyond Greed and Fear*: “One investor’s mistakes can become another investor’s profits. But one investor’s mistakes can also become another investor’s risk! ... Behavioral finance can help practitioners recognize their own errors as well as the errors of others”. Behavioural finance serves to make gap-filling modifications and justifications where mainstream economic theories do not seem to fit with reality. Despite finding a number of “anomalies”, they leave the bulk foundation of neoclassical economics unchallenged.

2.5 Substantivism in Anthropology

Anthropology provides a different approach to study exchange and production relations. Bronislaw Malinowski (1922) conducted pioneering ethnography in the Trobriands to study the exchange of *kula*. In 1925 Marcel Mauss drew upon his work, alongside to explore further on reciprocity and gift economies. According to Mauss (Mauss 1970), while the Melanesians were circulating their material possessions in the form of gifts, they were also shaping their social order, tribal boundaries, and relationships with spiritual powers. The meaning of their exchange activities was closely knit with social relationships, political order, morality, and religion.

In the 1940s – 50s, the influence of neoclassical economics propagated to the sub-discipline of economic anthropology. As a student of Malinowski with prior training in economics, Raymond Firth did a series of ethnographic work in the Polynesian society in Tikopia after his PhD (Firth 1936, Huntsman 2003), and helped to pave the way of the formalist school in economic anthropology. When studying production and exchange activities in target communities, formalists often borrowed the notions of markets, calculative maximization and individual rationality as given from neoclassical economics (Dilley 1992:14). They held the view that economic rationality on individual basis is universal, regardless of local cultural and social contexts (Prattis 1982: 207-208; see also Salisbury 1962, Burling 1962, Leclair 1962, Cook 1966, Schneider 1974).

Karl Polanyi's *Great Transformation* (1944) was the precursor of a contrasting approach known as substantivist. According to Polanyi, throughout human history market activities were always embedded within larger social and cultural contexts. The principles of rational choice and maximisation arise from the specific social institutions of modern western societies only. It would be ethnocentric if an anthropologist treats these principles as universal, applying them to all forms of societies regardless of their particular institutional embeddings. In other forms of societies such as the Melanesians, reciprocity and redistribution are major components of the local economies (Polanyi 1944:45-58). Polanyi held the view that only the substantive meaning of economic – how humans make a livelihood by adapting to changing environments (Prattis 1982:209) – is applicable to non-western, pre-industrial economies. He also saw the project of economists to “disembed” the markets from their historical-temporal and social contexts as an immoral and utopian project (Block: xxiii-xxvii).

Based on Polanyi's works, substantive anthropologists like Dalton and Sahlins held the view that when studying indigenous economies, culture and local contexts are the foremost factors. Meanwhile formalists such as Salisbury, Burling and Cook strongly believed that neoclassical market concepts should be applicable regardless of locality. In the 1960s – 70s, the two sides sparked off a long and heated

debate, which polarized the field of economic anthropology into two fiercely opposing camps. Perhaps the polemic deserves to take place on a broader stage of economics instead (*ibid*: 216): what is “the economy”; is the neoclassical market model universally applicable to all forms of social life concerning production and exchange? Unfortunately, the formalist-substantivist argument was locked up in a narrow scope of methodology within economic anthropology of indigenous economies. While the formalists imposed a universal rationality across all cultures from a deductive position, the substantivists also “essentializ[ed] a categorical difference” between western and non-western economies (Caliskan 2005:10). As both sides were unwilling to relax their restrictive views, the argument was exhausted in the late 1970s.

At a later stage, other researchers have incorporated new dimensions beyond the formalist-substantivist debate. The work of Stephen Gudeman (1992) on peasant communities in Panama can be considered as an extension to the substantivist view without clinging to a dichotomy between western and non-western economies. He proposes a position of cultural relativism: that exchange, money and profit are culturally constructed. He proposes that for every specific economy in question, local understanding and economic metaphors are important. MacFarlane (1987), Hamilton (1994) and Gray (2002) also portray different forms of capitalism arising from different cultures and civilisations.

The onset of globalisation can be seen as a last fatal blow to the division between formalists and substantivists. In her study of Shanghai’s stock market, Hertz (1998:5-7) challenges the boundary between “native” and “western”. “Native” economies are no longer isolated from the rest of the world. In her case, elements of Marxism have been integrated as part of the “native” system in Shanghai. Her field subjects were mobile across national boundaries and various social orders. They adopted concepts and terminologies from western markets, were aware of their position relative to the world, yet they lived in a socio-cultural environment with significant differences from European-American societies. In empirical reality, what

is native and what is foreign becomes a heterogeneous amalgam, which makes the formalist-substantivist dichotomy appear restrictive and obsolete.

2.6 Embeddedness Sociologists

After the formalist-substantivist controversy quieted down in the 1970s, Polanyi's warning against disembedded markets was largely forgotten. It was until Mark Granovetter wrote an influential paper *Economic Action and Social Structure: The Problem of Embeddedness* (Granovetter 1985) that new attention was revived on the issue. By putting more attention in economic subject matters, Granovetter attempted to reduce the gap between economics and sociology. According to Granovetter, the neoclassical model that ignores social and political contexts is "under-socialized", while sociologists and anthropologists (especially old substantivists) who only study social embeddedness without taking supply and demand into considerations are "over-socialized". He proposed the direction of exploring markets at the meso-level – try not to see market actors as atomized individuals, but to see the markets as made up of interpersonal networks, and trace the linkages between micro and macro social structures.

Social network analysis provides a good example of what Granovetter meant by "meso-level" analysis. Baker (1984) studied a group of traders in an American stock options market. By analysing their number of links, clique density and price volatility, Baker found that a large group size with more differentiated sub-networks lead to more opportunism in trading behaviour, and a higher volatility in prices. Burt (1984, 2005) studied the morphology of social networks, and proposed the pivotal importance of "structural holes": those network nodes that can establish valuable links between network cliques that are otherwise disconnected. Granovetter (1973, 1990) found that loose but wide personal networks provides "the strength of weak ties", which helps overseas Chinese merchants to build effective business networks of trust.

Besides social networks, social embeddings of markets are studied from institutional, cultural, moral, family and technological dimensions. Neil Fligstein (2001) investigates institutional embeddings such as state policy, regulation and corporate control of markets. Viviana Zelizer studies how money and insurance are attached to family relations and moral values (Zelizer 1979, 1994). MacKenzie and Millo study how the moral connotation of gambling exerts decisive influence on market regulation (MacKenzie & Millo 2003). Zukin & DiMaggio (1990) and Hamilton (1994) study how markets are embedded by cultures and civilizations. Knorr-Cetina & Bruegger (2002) and Beunza & Stark (2004) explore the environment of technological artefacts, such as communication networks and visual interfaces, on markets.

The term “embeddedness sociologists” is only arbitrarily taken here to describe diverse strands of research. The loose and vague definition of embeddedness is both its strength and weakness. Humans, materials, prices, culture, networks, knowledge... everything can be seen as social, and the markets can be seen as being embedded in everything. Apart from sharing a common opposition against neoclassical economics and the word “embeddedness”, there is hardly a central theme that can bring all the different strands further together into a systematic school of thought. Sociologists will face questions arising from economists and market practitioners: yes, markets are embedded in everything. After getting a gigantic, descriptive and complex lattice, can further implementations and implications be drawn from the perspective of social embeddedness?

Another critique of Granovetter’s embeddedness concept comes from Greta Krippner: she holds the view that the polarized boundary between the social and the economic should be further abolished. In Krippner et al (2004), Krippner criticizes Granovetter for keeping a distinct boundary between social and economic embeddedness, with the social side too restricted to interpersonal networks, which actually helps to maintain the Parsonian demarcation between economics and sociology. Krippner proposes that both social connections and economic mechanisms should be seen as simultaneously and interactively infiltrating the markets.

2.7 Performativists

In the last decade, a branch of sociologists launched their inquiry from a standpoint of epistemology and science studies to inspect the foundations of neoclassical economics. Drawing on the earlier works of Austin (1962), Barnes (1983) and Latour (1987), they investigate the “performative” properties of economics: how economics “performs, shapes and formats the economy, rather than observing how it functions” (Callon 1998:2). The core argument is that economists do not merely describe an objective reality. They are concurrently building their theoretical basis of knowledge, as well as shaping the economic status of society. Case studies from this perspective include the markets of financial derivatives (MacKenzie and Millo 2003, MacKenzie 2007, Lépinay 2007), telecommunication spectrum actions (Guala 2007, Muniesa and Callon 2007), fishing quotas (Holm 2007), strawberries (Garcia-Parpet 2007), pickles (Didier 2007), and cotton futures (Caliskan 2005).

As compared to mechanics in physics (MacKenzie 2001), economics apparently adopts scientific methods based on empirical induction, observing the empirical world and taking objective market data; and analytical deduction, making conjectures of abstract models, predicting future events by calculable and operable models. However, performativists call for attention another process that is often overlooked: that market agents (traders, producers, consumers, regulators, and governments) sometimes realign their actions in response to economic theories and predictions. The knowledge produced by economists tends to feedback into the markets, helping to reshape the very subject (the economy) that economists seek to study. In other words, by studying the markets, economists may be changing the properties of the target of their study.

A linguistic version of performativity was presented by John Austin in *How to Do Things with Words* (Austin 1962). For example, when a priest proclaims a male and a female as “married”, or when a monarch declares a subject as outlaw, these are “performative utterances”. These are speech-acts that can remarkably change the identities and social relationships of the subjects involved. Yet the

speech-acts involve “conditions of felicity” (Austin 1962), which Bourdieu (1991) described as social conditions, such as institutional power of the priest and the monarch, to make these performative utterance actually work. The sentences will not work if they are spoken by a chef or a serf, or at an inappropriate time and place. Similarly for economic theories to work in empirical markets, a lot of active work is required from the institutional, material and social dimensions to fulfill the conditions of felicity. Michel Callon proposes that economic reality is constructed by integrating composite factors such as economic theories, materiality, institutional powers, cultural values, laws and property rights, currencies, accounting and marketing procedures, and technological tools (Callon 1998: chapter 1). The power of change in empirical markets comes from the combination of knowledge, materiality and conditions of felicity (MacKenzie 2007:69); the performative effect of economic theories alone does not work like “magic” “out of thin air” (Didier 2007). Callon uses the terms *agencement* and co-performation to describe such a heterogeneous synchronization process of knowledge, linguistic representation, action, materiality and social institution.

One criticism of Callon comes from Daniel Miller (Miller 1998). Miller starts out from a position similar to that of Callon. He notices that economists are not accurately representing the economic reality in the models they construct. They tend to project their abstract models onto the real world instead, and keep working on their models in a way that Miller describes as “virtualism”. By virtualism, Miller means that the abstract models remain separated from the economy in reality; neoclassical economics is problematic, because it drifts away on its own without real engagement with the empirical world. Holm (2007) uses a case study in transferable fishing quotas to defend the position of Callon: theoretical models built by economists may be abstract at first, but they are not virtual phantoms dangling outside reality. Instead, through efforts of qualification, collection of statistics, and the implementation of rules and procedures, the abstract models can serve as templates to mobilize actual changes in the empirical economy. The power of neoclassical economics in part lies in the possibility to close the gap between theoretical model and reality.

Mirowski and Nik-Khah (2007) launch another critique. They think the performativity notion can be used to justify any economic model to go unchallenged, because all economic models are to be seen as capable of shaping the economy; all of them can be approached as true (p.199). Mirowski warns the performativists that they have lost the previous sharp edge of science studies on natural scientists, and have turned a blind eye to the issues of power and interests when dealing with economists. Mirowski holds the view that the performativists have “the economic setting deliquesces into a gauzy spider’s web of networks, hazy and indistinct” (p.202), failing to challenge the legitimacy of economic models, and may be readily solicited by economists and their sponsors (p.200). Although Mirowski’s hostility against economists and the performativists is not explicitly and fully substantiated, his critique serves as a reminder for the performativists to stay attuned to issues of power and interests.

Callon refuses a position of cultural determinism. He disagrees with the view from the culturalist approach that some market agents “resist calculative rationality” because they are “embedded in the social or cultural frames which turn them away from it” (Callon 1998: 5). According to Callon, the notion of “calculative device” is applicable across markets from different cultural backgrounds. Callon’s response to the difference in cultural backdrop is to broaden the definition of “calculation”: gifts, reciprocity, altruism and selfless dedication all involve some form of calculation. These actions may involve a different framing in the form of reward, scope of reward, and time frame of reward. For Callon (1998), markets are created by framing and distanglement from the existing social embedding to allow the calculative devices to work. The form of calculation may differ, but the calculative device is a basic unit that is universal to all markets.

Here my view diverges from that of Callon (1998). Although a position in cultural determinism cannot stand in the light of heterogeneous co-performance, on the other hand I think, encompassing the notion of calculative device as universal risks bringing a shadow of the old formalists back from the 1960s – 70s. Callon has tried to broaden the definition of “calculation”, but can market agents from all

markets fit into the notion of “calculative device”? Civilizations that do not share the Weberian foundation of capitalism can have very different forms of morality and social order (Hamilton 1994). In these markets the boundary between private and public can be different. The unit of cognition and action can switch between the individual, kinship groups, micro local cliques, macro social groups, and the state. People may incline to “think” in terms of pictorial forms of representations or by intuition, not by quantifiable numbers. The perception of time frames can be different. Market agents may have different cosmic views, and different understanding about the state, authorities and charisma. As Gary Hamilton (Hamilton 1994:184) wrote about how political orders are legitimized and institutionalized, “Imagine... a civilization that was not historically shaped by Christianity or by any other form of monotheism [,] and... did not... conceptualize a meaningful level of human action and causation beyond the world of human experience... For most Westerners, this is a difficult mental experiment... Such a mental experiment, however, is useful to try.” Although cultural differences are not essentialist or deterministic,⁴ nonetheless they still have significant contribution towards the process of co-performance.

Despite Callon’s efforts to broaden the notion of “calculation”, it can still suggest mathematical calculation, a universal form of reasoning founded upon Weberian rationality, and even a return to the formalism of the 1960s – 70s. The broadened definition of “calculation” can be seen as fitting markets outside the experience of Enlightenment and Protestant ethics into a primary template of Weberian rationality and mathematical calculation,⁵ which is ethnocentric. The

⁴ Callon (1998) used the study of Gao (1998) on Japanese markets to argue that calculative devices are present under different cultural backgrounds. Gao is one case of co-performance with efficiency, politics and culture, but there can be other scenarios in non-western cultures where the word “calculation” is too restrictive. See Yuan (1948).

⁵ For example, according to the Confucian philosopher Mencius (孟子), rationality based on monetary calculation could be associated with “lowly character” by Mencian values, as opposed to moral

broadened definition of calculation is comparable to the new institutional economists, who apply the concept of transaction costs to issues that used to be outside the scope of neoclassical economics, such as family relations. By promoting the word “calculation” (Callon’s case) and “transaction cost” (new institutional economists’ case) in previously non-applicable areas, Callon and new institutional economists actually serve to spread and reinforce the neoclassical model by generic or effective performativity (MacKenzie 2007:55).

Alternative to “calculative device”, I suggest a more culture-neutral term “choice device”, which leaves blank the properties of decision-making. In places where economic decisions are, to a greater extent, tilted towards distributed cognition (Hutchins 1995) in social collectives and networks instead of individuals; towards politics, moral values, norms, inertia... instead of monetary calculation; the word calculation seems to emphasize the mathematical, quantitative aspects of decision-making and undermine other aspects. I suggest relaxing market devices from the word “calculation”, so as to encompass wider possibilities how these market agents may vary in their behaviours and modes of decision-making.⁶ The latter is important, because it gives us a broader view of the flexibility how market agents can be reconfigured. As shown in Siu (2002), market volatility and uncertainty can arise from rapid reconfiguration of choice devices; Weberian rationality and calculation is only one of the possible modes of decision-making in the markets.

thinking by men of decent character: “Those who calculate by dimes and nickels are men of lowly character. (銖銖必較，是為賤丈夫也) – quoted from *Gongxunchou* 《公孫醜》 by Mencius.

⁶ In the comparison between four forms of capitalism (European, American, Russian and East Asian), Gray (2002) argues that the American form of capitalism is constrained by holding on to “illusions and superstitions of the Enlightenment” (P.132).

2.8 Ethnography of Contemporary Markets

From the 1990s on, ethnographers from sociology and social anthropology became more daring in crossing over the previous demarcation between economics and sociology/anthropology. They start to walk straight into the heart of contemporary markets: the exchanges of commodities, stocks, bonds, and financial derivatives.

A good example of this ethnographic work is Abolafia (1996), who conducted ethnographic research over a decade to study the local organisation and culture of bonds, stocks and futures markets in the United States. He found that traders in each of the three markets act under a different degree of opportunism or restraint. Between the polarized viewpoints of hyperrational maximizers and the institutional approach of regulation and constraint, Abolafia managed to strike a synthesis. The local norms and culture of a particular market pit do not come from the inherent rationality of individuals. They are the combined result of social interactions within a (largely) closed status group, and the institutional context embedding the particular market. Abolafia also explores the issues of reputation, norms, cognitive information flow, and regulatory control in these markets. Rather than seeing markets as abstract meeting points of supply and demand, he elegantly demonstrates that markets are made up of actual communities, cultures and institutions.

Zaloom (2006) is another contribution to this ethnographic literature. Her work is an ethnographic study of open-outcry trading at the commodity markets at the Chicago Board of Trade (CBOT), and electronic trading at the London International Financial Futures Exchange (LIFFE). Caitlin Zaloom records the open-outcry trading pits as a place spanned by physical movements, social connections, reputation, status, and face-to-face human interactions. In contrast, dealers in electronic markets act alone in silent concentration. Much of the physical and human social aspects of trading are gone; digital traders have to rely on their feelings towards the “rhythms of the numbers” on their screens (P. 150). Zaloom sees the transition from open-outcry trading to electronic trading as a process of

rationalization (P. 162-163). During the realignment of technology and market practices, markets are further shifting away from social connections, cultural life, physical aggression (P. 176), voices, bodies, and specific locations. Trading rooms are getting more quiet and shiny, in a brave new world of electronic representation and modernity.

The ethnography of Hertz (1998) in the stock market of Shanghai, *The Trading Crowd*, is the only existing ethnographic work on Chinese markets. Her work was conducted when the “stock fever” swept over Shanghai like a mass movement (Wank 2000) in 1992. Hertz spent ten months in Shanghai’s street corners, VIP trading rooms and stock salons to experience what the episode meant to the locals, and gives an account of the interplay between big players (*dahu*), dispersed players (*sanhu*) and the State (*guojia*). Her work crosses two methodology boundaries: she starts out from a social anthropology position to research a social institution usually categorized under economics and finance (p. 15-16); and she carefully addresses the power asymmetry between Euro-American capitalism and her Chinese field subjects (p. 8-11). Hertz finds that her field subjects put a lot of emphasis on “policy analysis”. China’s long-standing social order as a tributary state, in part, shapes the contemporary relationship between market and state; the Shanghai market cannot be fully understood just by applying the concepts of the invisible hand, regulation and intervention from economics. Likewise the crowd behaviour of dispersed players at street corners and stock salons is very different from that of individual *Homo economicus*. State control and crowd behaviour have some properties overlapping with regulation, supply and demand in generic markets, yet they have something particularly related to the local political context and social order such as *guanxi* (relationship) networks. The findings of Hertz show that contemporary markets cannot be tackled by the approach of pure formalists or pure substantivists alone. Her field records of the events surrounding the Ninth Party Congress (pp. 174-187) provide a valuable case for the performativists: whether market players adhere to the will of state control or group dynamics is a process of intricate balance, in which negotiation and reconfiguration take place continuously. It would be too coarse and simplistic to read the event merely as “the market triumphs

over state control”, or as evidence that the post-Communist markets are undergoing a unidirectional transition from planned to market economy (Nee 1996).

Wank (1999) is a study of how private enterprises in southeast China city Xiamen conducted business in the late 1980s. Wank’s study is not directly on financial or commodity markets, yet he describes an important feature in the state-market relationship of contemporary China that is relevant to this study: clientelist ties. To conduct business, a firm usually needs some of its members to establish interpersonal ties with counterpart contacts in the state structure. On one hand, these ties involve obligations and reciprocity very similar to the traditional *guanxi* networks; the ties also involve a power imbalance, with the state side plays an upper hand in a vertical power structure. The state or para-governmental side possesses the much-sought-after political resources that private enterprises need to run their business, such as the power to approve, allocate, distribute, protect, or simply to pass on information. These clientelist ties are extensively established and embedded within the wider social and political context. Wank points out an important point in the transition theory debate of China studies. China’s market reforms are not a simple transition from *guanxi* networks or state control to market mechanisms. Instead, Wank sees that political power, markets and *guanxi* networks are establishing a new format of association. Through clientelist ties, political power is commoditized, exchanged and circulated as an integral part of the markets.

2.9 China Studies: Social Order

As markets in China are embedded in the local social order and culture, it is helpful to give a brief introduction to a number of specific perspectives from China studies on society and commerce that are particularly useful from the viewpoint of the

research reported here. The early sociologist and anthropologist Fei (1992 [1947])⁷ suggested the existence of two contrasting concepts of social organisation – “differential mode of association” (差序格局, *chaxu geju*) and “organisational mode of association” (團體格局, *tuanti geju*). In Fei’s analysis, the organisational mode of association arises from civilizations rooted in monotheist Christianity, where a cosmic order beyond the human experience exists in people’s consciousness (Fei 2005:42-44). The principle of egalitarian human rights and universal laws are founded upon the conviction that every member of society is equally related to God and salvation. Hence social groups are characterised by equality in rights and obligations for every member, and there are clearly codified rules and regulations applicable to all members of the same group. For most social groups, there is a clear boundary between members and non-members.

Fei’s differential mode of association arises, in his view, from a human-centric cosmic view of Confucianism. In a Chinese society where supernatural deities have little influence on social and political order,⁸ society is founded upon relational social networks that originate from every single person. These networks radiate along the lines of kinship and locality “like ripples spreading out in concentric circles” (2005: 34-38). Ethics and moral values (e.g. benevolence, filial piety, etiquette and trust) are network dependent, as the Confucian standard for appropriate behaviour depends on network positions and social distance. The ethical standards for fathers and sons, elder brothers and younger brothers, rulers and subjects, husbands and wives are different; and there is no universal yardstick applicable to everybody. These networks are also scalable and flexible, as they have

⁷ Fei Xiaotong was a student of Bronislaw Malinowski. He got his PhD from the London School of Economics in 1938, and was one of the earliest researchers who applied ethnographic methods in Chinese societies, including his ancestral village in Jiangsu.

⁸ Confucius shifted the worship of supernatural deities to the worship of ancestors, further solidifying a social hierarchy by kinship and seniority.

no definite boundary of where membership applies or not. For example, the “family” of a poor peasant may refer to a few persons living under the same roof. However, for a powerful and rich person of high status, one’s “family” would include distant relatives and subordinate subjects (2005: 31-32). Unlike the organisational mode of association, there is no clear boundary between the self and the social groups. The merit of Fei’s work lies in the way how he applied Weber’s analysis of the Protestant ethic to Chinese societies, linking the religious heritage of two contrasting civilizations with their respective social organisations. Fei (2005[1947]) is only a thin booklet of 137 pages, yet in 1947 his radical and lively use of local examples and Chinese classics in a new light of sociology put him forward as the foremost founder of sociology in China. Critiques point out that Fei tended to polarize the properties of social organization as “Chinese” or “Western”, his roots of functionalism (Nee 1994), and that his simple model of social network is later taken on by the school of social network analysis (Guldin 1994). Nonetheless Fei’s work helped to lay a foundation for researchers in later generations.

Another piece of work in legal studies by Qu (2003[1947]) is helpful to this research. Qu analysed a large volume of laws and penal codes from dynasties from Han (202 B.C. – 220 A.D.) to Qing (1636-1912) in China. He listed examples of conditional clauses being written into the codes. These conditional clauses specified how penalties should be aggravated when an offence (e.g. murder, adultery, assault) is committed by a junior person to a senior person in the social hierarchy; and how they should be alleviated when an offence is committed in a vice versa direction. The conditions of relative social positions *are* a constitutive part of the legal code. The analysis of Qu came to the conclusion that the execution of laws in ancient China was slowly and gradually “Confucianized” over the ages from Han to Qing in two

millennia, encompassing elements from the flexible Confucian social order of *li* (禮) (Qu 2003: 292-309) and the mode of differential association.⁹

Edgerton (1985) points out that the infinite possibilities of conditional clauses, or exceptions, posed a challenge to legal studies. As the conditional adjustments are often exercised by discretion of the scholar-officials, an auxiliary code of guideline is needed. Yet the interpretative possibilities of the auxiliary guideline can further lead to an infinite regression. Traditional China ended up with laws attached to a large but finite number of exceptions (Edgerton 1985: 16-21). “By recognizing a large but finite number of exceptions, Chinese law attempted a compromise between permitting personal and circumstantial mitigation for wrong-doing and imposing strict liability. It was an attempt to codify complexity... [O]ver millennia, the Chinese system of law epitomized the fundamental opposition between strict rules as control mechanisms and the complexities of human living that seem to demand exceptions to those rules” (*ibid* pp. 20-21). As shown in the case of exchange Q in Chapter 6, this classical dilemma in traditional China is still present in post-Communist markets of China today.

The work of Yang (1994) provides a bridge between traditional and contemporary Chinese societies. The word *guanxi* is often associated with an elaborate exchange system of gifts, favours and banquets. From her ethnographic fieldwork conducted in China in the 1980s and early 1990s, Yang shows how the gift economy operates in a larger context of the socialist state redistributive economy. Yang sees the non-hierarchical, rhizomatic networks of human relationships (Fei

⁹ Legalists as an ancient philosophical school had once been prominent (Zhou and Qin dynasties, 770-206 B.C.). They proposed the rule of law (*fa* 法) and the use of codified rules applicable to all social classes (Qu 2003: 319-329) except the Emperor. On the contrary, the Confucians proposed the rule of *li* (禮), which is a system of flexible social morals specific to particular social roles and relative network positions. The rule of *li* is sustained by case-by-case discretion instead of codified laws; edification and education rather than penalties.

1947, Liang 1949, Deluze et al. 1984) as a form of secondary society. Yang calls this secondary society *minjian* (民間), which means civil space (*ibid*: 174, 287-301); it is the major space where social life can take place outside the state structure (*ibid*: 289). *Minjian* differs from the standard “western” concept of civil society, because *minjian* is not made up of fully-formed, clearly defined individuals and social groups. In Yang’s *minjian*, the boundary between the self, social groups and society is never very clear, and social agents are much less individualized. Mutual obligations just exist within an abstract, borderless and rhizomatic network of interpersonal *guanxi*. Yang holds the view that this secondary society had already served as a resource of mutual support and protection for individuals during the Cultural Revolution; it is not being replaced by markets (*ibid*: 166-176), and it will continue to be a promising direction of development for contemporary Chinese society.

2.10 Post-Communist Markets

In economic sociology there is a substantial volume of literature on the state-market relationship in post-communist countries. The published work of Victor Nee about Market Transition Theory (MTT) in the *American Sociological Review* (Nee 1989) set the foundations for a long debate. His work was about the shift from a planned economy to a market economy, and how it changed social stratification and eroded the power of the political elite (Guthrie 2000). Nee produced 10 testable hypotheses, substantiated with a survey project conducted in the province Fujian (福建) in 1985, and used indicators like household income to verify his hypotheses. He showed that the market favoured human capital over political capital, and direct production was taking over from redistribution (in Polanyi’s sense). Nee held the view that markets would eventually diminish the power of the State, and increase the freedom of individuals in their exchange activities. Through market reforms Chinese societies would converge with those in advanced capitalist nations of the West.

Nee’s meganarrative of a linear market transition was contested by a number of researchers like Róna-Tas (1994), Parish and Michelson (1996), Bian and Logan

(1996), Xie and Hannum (1996), Gerber and Hout (1998), and Zhou (2000). The Hungarian case of Rona-Tas (1994) proposed the alternative thesis of power conversion, which suggested that those in power before economic reforms were still in much better positions to gain advantages during the reforms. Bian and Logan (1996) found that those working in the state sector and those having redistributive powers in their positions had much higher income than others. The main weakness of Nee's market transition thesis was that it could not satisfactorily explain empirical evidence that the power of former state cadres seemed to persist or gain new vigour in new formats. Researchers like Wank (1999) suggested that market transitions were path-dependent, vary between sectors and regions, and could produce divergent forms of economies.

Gates (1996) provides another perspective from Marxist materialism. She suggests that since the late imperial times in the Song dynasty (960-1279 A.D.), the economy of China has been running upon dual modes of production: the tributary mode of production (TMP), and the petty-capitalist mode of production (PCMP). In the late imperial times, the tributary mode of production was made up of an elite class of Confucian scholar-officials, who operated a national bureaucracy and extracted "surpluses" from the masses (Huang 1997:117). Merchants had a long history of being repressed over the dynasties (Yuan 1948),¹⁰ and there was a wide gap of class and status between merchants in the PCMP and scholar-officials in the TMP (see Ho 1954).¹¹ Gates suggests that in the post 1949 period, rather than being

¹⁰ Over the dynasties, sometimes merchants were a class barely above farmers and women; sometimes they sank to the lowest bottom of the social ladder as equivalents to outcasts. The traditional class structure and cultural values had elaborate measures to forbid merchants from acquiring power and social status by their monetary capital (Yuan 1948).

¹¹ The study of Ho (1954) found that while Europe was beginning to undergo industrial revolution in the 18th century, the richest group of merchants in China at that time, the salt merchants of Yangzhou (揚州), spent most of their profits to overcome their inferior class status. Instead of reinvesting their capital for further production and trade, they channeled their funds to the education of their offspring

abolished, the TMP is partially replaced by nationalist in Taiwan and by Communist cadres in mainland China. In contrast, the petty-capitalist mode of production is made up of the commoner classes who make a subsistence living. They distribute the surpluses that remained from the TMP by means of wage labour and “patricorporations” – a hierarchical system made up of kinship and gender (Hertz 1998: 13). Gates argues against the view of Marx that late imperial China belonged to a broad “Asiatic mode of production”, where a stagnant empire “vegetat[ed] in the teeth of time” (Gates: 1996: 18-19). Instead, within the PCMP, dynamic wage labour, markets, private property, and classes were already present far back in imperial times. However, a large part of surpluses from the PCMP were “channeled to officials” in the TMP, in contrast of being channeled to capitalists in the industrial revolution of Europe (*ibid*: 39). What makes the Chinese economy different from its American or European counterparts are not essentialist “Chinese characteristics” just because this economy is “Chinese”. The difference comes from a longitudinal development of the TMP/PCMP economic formation that had been in motion for over a thousand years in history, which is both a heritage and burden not shared by their European or American counterparts. Gates also dissolves the historical sharp breaks between “feudal China” in the pre-1949 China or “sprouts of capitalism” after 1978, as sometimes held by Chinese official historiography or historians in China (Huang 1997:119). The analysis of Gates suggests that, the dual economy of TMP/PCMP is evolving in continuity from the late imperial times, nationalist period, Maoist era, to the current economic reforms. This framework helps to explain why contrasting properties – such as moralism, kinship ties and social harmony on one hand; calculative and ruthless competition on the other – seem to coexist in China’s economy (Huang 1997:117).

(to turn them into the upper class of scholar-officials); distributed the wealth through their kinship network (to fulfill the moral value of filial piety); and, for a few notorious merchants, spent their riches in extravagant showoffs such as sprinkling gold powder on spectacular mountain tops.

In my fieldwork findings in Chapters 5 and 6 there are traces to be found of relationships that echo, at least faintly, Gates' distinction between the TMP and PCMP. However, while Gates (1996) provides a helpful economic and ideological framework to understand contemporary markets of China, the complexity of empirical markets is probably beyond the description of any single schematic model (Hertz 1998: 15). In fact in the recent decades, TMP and PCMP may be infiltrating each other. Political power in state structures and para-governmental bodies is being commoditized, circulated and exchanged in the markets. One phenomenon to note is the emergence of para-governmental organizations of quasi-public, quasi-private nature (Francis 2001). Corinna-Barbara Francis provides a clear and concise account of how post-Communist countries tend to blur the boundary between public and private institutions during their market development. Unlike how the earlier capitalists societies emerged alongside a clear demarcation between the public and the private spheres, as linked with the Enlightenment and the Weberian analysis of bureaucratization, many post-Communist countries seemed to follow another path. It was through the symbiosis and interdependence between public and private sectors that economic developments were realized.

Chapter 3 Contextual Background

In countries where capitalism has been practised for centuries, now it becomes a daily routine for market participants to check the self-aligning, free-floating prices of agricultural grains traded on national commodity exchanges. However, this is still a novel concept in China about setting up such exchanges, and arguably prices are not yet fully self-aligning or free-floating according to market forces (Yao 1998:126-130). In China state leadership has replaced the functions of the private sector in setting up futures exchanges, which it has been argued, leads to “distortion of prices”, and do not align by neoclassical models (Ma 2003).

3.1 Commodity Futures in China (1820-1920)

In China historically the prices of agricultural grains had been embedded within political and communal contexts. Peasants in ancient dynasties made payments of grains as a form of tribute and allegiance to the dual ruling structure – the national monarch and the local gentry (Fei 1991). Meanwhile the ruling class redistributed grains in the form of granaries and warehouses to non-agricultural subjects including the officials, the military and the leisure class (Polanyi 1944: 54). Despite the presence of bazaar markets and trade, the value of grains was heavily linked up with political power and communal relationships.

The early development of futures products in China can be traced back to the exchange rate futures of silver ingots in coastal city Ningbo in the 1820s-30s, when different Chinese cities such as Shanghai, Tianjin and Hankou had different unit standards for silver. These futures were not recognized by the Qing government, nonetheless the “Ningbo standard ingot futures” (寧波規元期貨) still became a successful product in the 1870s (Shen 2003:114, Du 1996:3-4).

Lei (1981) did historical research from primary archival data on soy commodities in northeast China. She found that during 1870-1930 soy products

constituted 60-90% of the total exports from the region. Europe and Japan were the major destinations of trade, especially during World War I when Europe was in great need of soy oil and food supply. An elaborate trading system of *liangzhan* (糧棧 taverns with warehouses) and *liangshi* (糧市 grain markets) already existed over the region in the late 19th century. The trading system made use of irregular spot and forward transactions,¹² and was built upon a personal network of trust and credit.

Many of the earliest exchanges (*jiaoyisuo* 交易所) in China were established by foreign merchants. In 1892, the first stock exchange in China was formed by European and American merchants in Shanghai. The “Shanghai Stock Exchange” (上海證券交易所) was established in 1906, initiating securities and commodities trading (Shen 2003:114). Most of its 100 members were British and American brokers (Zhu 2007).

Since the earliest exchanges were largely controlled by foreign brokers and backed by colonial interests, there were strong nationalistic appeals from the Chinese business circles to the Beiyang government¹³ demanding for their own exchange. The first Chinese industry association for stock trading was formed in Shanghai in 1914. Yu Qiaqing (虞洽卿) was leading the initiative to establish an exchange by Chinese merchants in Shanghai, but he encountered a number of difficulties in licensing, political turmoils, as well as conflicting interests arising from other Chinese merchants in Shanghai (Zhu G.-m. 2007). Meanwhile, with the support of republican leader Sun Yat-sen (孫中山) and led by Chinese merchant Wang Jingfang (王景芳), the Peking Securities Exchange (北平證券交易所) was quicker to come to

¹² See Glossary in Appendix 2 for the meanings of spot, forward, and futures.

¹³ The Beiyang government 北洋政府 (1912-1928) was sometimes also known as the warlord government.

inaguration. It was formed in 1918, trading on stocks, bonds and futures (Shen 2003:116).

After the Russo-Japanese war in 1905, Japan gained control over the northeast part of China then known as Manchuria.¹⁴ In 1913 the Japanese introduced the first futures exchange in Dalian, establishing the export harbour as the hub of a combined market of commodity spots, forwards and futures for soybean, soy meal and soy oil. Likewise nine other exchanges were established in northeast China under Japanese control, one was set up by the Russians in Harbin, and four were established by Chinese merchants during 1913-1931.¹⁵ These exchanges traded in soybean products, wheat, durra, livestock and fabrics. In addition, currencies were traded in the Japanese exchanges only. The three-tier system of *liangzhen*, *liangshi* and *jiaoyisuo* served as the mediation system between domestic farmers and overseas export grain traders, facilitating the Japanese to control export trade. Lei has shown archival evidence that during the period, standardized 3-month and 6-month futures contracts already existed in the Yingkou exchange. Transferable paper documents were issued by merchants when the shipping route River Liao went frozen; the futures contracts were honoured in the following spring when the river thawed (Lei 1981 pp160-161). In 1918, Japan also expanded its influence to Shanghai. Led by several Japanese textile firms (Zhu G.-m. 2007:49 from the Shanghai municipal archive), the Japanese merchants and consulate established a new exchange (上海取引所) there to compete with the Europeans and Americans. The exchange traded in securities, cotton and yarn (Shen 2003:117).

¹⁴ The area is now known as the provinces of Heilongjiang, Jilin and Liaoning.

¹⁵ The Japanese exchanges were established in Dalian, Kaiyuan (開原), Changchun (長春), Gongzhuling (公主嶺), Tieling (鐵嶺), Sipingjie (四平街), Fengtien (奉天), Yingkou (營口), Liaoyang (遼陽), Andong (安東) and, for currencies only, Harbin (哈爾濱). The Chinese exchanges were set up in Fengtian (奉天), Jilin (吉林), Harbin and Changchun (Lei 1981 pp158-159).

The Japanese initiative stimulated a new wave of nationalistic appeal to support Yu Qiaqing's Chinese exchange in Shanghai. Yu was pre-empted by a smaller rival exchange, Shanghai Chinese Merchants Securities Exchange (上海華商證券交易所), which was led by Fan Jumei (范季美) and inaugurated in May 1920. Eventually Yu managed to overcome difficulties and inaugurated the Chartered Stock and Produce Exchange (上海證券物品交易所) in July 1920, trading securities, cotton, yarn, fabrics, gold, silver, food and oils, and leather (Zhu G.-m. 2007:50).

3.2 Trust and Exchange Crisis in 1921 (信交風潮)

In its first six months, the Chartered Stock and Produce Exchange made a profit of 30% for its shareholders, and the Shanghai Chinese Merchants Securities Exchange also made a profit of 40% in the first year (Zhu G.-m. 2007:75). This triggered a wave of dramatic optimism in forming new exchanges and speculating their stocks, known as the “trust and exchange crisis (信交風潮)” in 1921. Shortly within a few months in 1921, more than 100 exchanges were formed within Shanghai alone (Zhu Y.-g. 2006:75-76). Zhu Y.-g. (2006) listed different historical records that gave a total count of 112, 117 and 136 exchanges respectively – in fact it was difficult to have an accurate total count, because many exchanges were registered within foreign settlement territories (租界), or were never registered at all. The products traded included bonds, stocks, gold, yarn, cloth, linen, coal oil, matches, timber, gunny sacks, cigarettes, alcohol, grit, and sand. The proliferation of exchanges quickly extended to cities including Ningbo, Guangzhou, Hankou, Tianjin, Nanjing, Zhenjiang, and Suzhou. The share prices of exchanges went through an extreme boom in summer and autumn 1921, and investors went into a euphoria. All the new exchanges founded within the year 1921 had a total capital of 148.55 million yuan, which was more than the total capital of all the 82 banks in China added together (51.99 million yuan) (Zhu Y.-g. 2006 quoting on People's Bank of China 1960:118). Banks and trust companies started to tighten loans to the exchanges in winter 1921. This triggered off an abrupt bust throughout the markets. By spring 1922, only six

exchanges in Shanghai remained; the others all ended up in bankruptcy. Grievous loss and multiple incidents of suicide were reported in the investor community. Zhu Y.-g. (2006) holds the view that these speculative markets were “childish, deformed” (P.74), and were not helpful in providing fundamental capital for Chinese firms in industries and trade (P.84).

The “trust and exchange crisis” in 1921 led to the loss of public trust in stocks and commodities, and a period of depression in futures markets followed (Shen 2003:119). Improved regulatory laws in 1929-1930 revived public trust to some extent, yet these sporadic market revivals were interrupted by the Sino-Japanese war and internal wars. After the communist regime took over China in 1949, the Shanghai securities and futures exchange and the exchange at Tianjin were abolished in 1949 and 1952 respectively.

During 1953-1978, the production, pricing and distribution of major commodities in China were taken over by agricultural communes and a system of state control (Yao 1998). China under Maoist communist rule adopted the policy of “price scissors”: to finance industrialization by extracting a surplus from agriculture (Liew 1997: 9-25). By cultivating a spirit of altruism and patriotism among the peasants, and re-organizing agricultural activities under collectivized communal farms (which served as a system of price coercion) (*ibid*: 15), the state managed to procure grains from the peasants at a price below the free market equilibrium price. However total agricultural productivity fell during the period due to low incentives. Futures exchanges did not resurface until 1992.

3.3 Devising Futures Markets after 1979

In 1979 with economic reforms launched by Deng XiaoPing, state procurement prices increased significantly. The dual-track price system (價格雙軌制) was also introduced: once peasants had fulfilled their state procurement quotas they could sell their crops at market prices (*ibid*: 25-26). Productivity increased under this mixed system of planned and market economy, but problems like corruption, state fiscal

deficits and regional price gaps also surfaced (Yao 1998:126-127, Liew 1997:26). In the midst of the dual-track system, to fulfil provincial procurement quotas rich grain-deficit provinces tried to buy from farmers in inland grain-surplus provinces at higher prices. This drove local governments at various levels into conflicts of “commodity wars”. In 1990, inland Hunan province set up explicit road blocks to prevent local farmers from selling rice to coastal Guangdong (Liew 1997: 27). Similar “wool war” and “tea war” were recorded, where regional authorities erected embargoes on cross-provincial flow of trade to protect local interests (Qian et al 1992: 55). In response to existing problems, in 1993 the central government endorsed the policy to “develop a commodity markets system” with a circulation mechanism and a pricing mechanism, aiming at the gradual elimination of the dual-track pricing system (Yao 1998:127).

For this initial period of market development, academic references in English such as Yao (1998), and journalistic reports from Hong Kong and abroad emphasize “learning from the West”. Meanwhile most of the sources from domestic research institutes emphasized the leading role of the Chinese state, and most of them quoted Yang Jingyu’s proposal as the first initiating trigger. Qian et al (1992) is a collection of original government documents and reports in 1988-1992, and Suen et al (2005) is a comprehensive academic account. My account is an attempt to triangulate between the above sources and perspectives. The early initiatives to reintroduce futures markets in China could be traced back to 1986, when the Chinese government signed an agreement with the Chicago Board of Trade (CBOT) about developing a commodity futures market in China (Yao 1998:110). In 1987, Hong Kong businessman Yang Jingyu (楊競羽) made a proposal to top political leaders of the state (Suen, Zhu et al 2005:64). The following major moves were led by the state in a top-down manner. With the support of then Premier Li Peng (李鵬), the early focus of research was to maintain the stability of non-staple food prices in urban cities, and to balance the interests between producers and consumers. In 1988, the futures markets working group was a joint unit between the pricing unit (under the State Council’s development research centre 國務院發展研究中心價格組) and the

circulation commission (under the National Organizational Reform Commission 國家體制改革委員會流通司). Research work was conducted on overseas futures exchanges, American experts were invited to give training seminars, and study tours were organized to the Hong Kong Futures Exchange (*ibid*: 64, Qian et al 1992: 49, 236-241). A group of Chinese economists was sent to visit the CBOT, memorandums were signed between the two sides, and Chinese personnel were sent to Chicago for training (Yao 1998:110). In June 1988, regional governments from Henan, Jilin, Sichuan, Hubei and Guangdong were considered for setting up prototype futures markets (Qian et al 1992: 48-49, 171-183), and Zhengzhou (鄭州) in Henan province was selected as the first point of trial on wheat and non-staple grains¹⁶ (Suen, Zhu et al 2005:64).

The China Zhengzhou Grain Wholesale Market (中國鄭州糧食批發市場) was established in October 1990 (Qian et al 1992: 318-330), and the first wheat forward contract was traded in March 1991 (Suen, Zhu et al 2005:64). Zhengzhou was located on the wheat belt of China in a province geographically central in the country; it was located on the intersection of two major railways, the north-south Beijing-Guangzhou line (京廣線) and the east-west Longhai line (隴海線, which runs from eastern coastal port Lianyungang 連雲港 to western city Lanzhou 蘭州), as comparable to Illinois and Chicago in the US (Qian et al: 106-107). Yet delivery and logistics problems arose due to shortage in railway capacity (Suen et al 2005: 66; Qian et al 1992: 55). The first set of trading rules was launched in Oct 1992 (Ouyang 2006: 87); the wholesale market was restructured into the Zhengzhou Commodity Exchange in May 1993, and started the trading of standardized futures contracts in wheat, corn, soybean, mung bean, and sesame (Ouyang 2006:86-89, Suen et al 2005: 66, Yao 1998: 111).

¹⁶ Corn in Jilin, rice in Wuhan, and live pigs in Sichuan were proposed as second-phase trial points in 1990 (Suen, Zhu et al 2005:64). The plan did not materialize, partly due to political disruptions associated with the Tian'anmen Square Incident in 1989.

3.4 Proliferation of Futures Exchanges

Other provinces and municipal governments were also on the move. With the support of the National Organizational Reform Commission and the State Council, the southern economic special region Shenzhen established the “Shenzhen Non-Ferrous Metal Exchange” (深圳有色金屬交易所) for copper, aluminium, lead, zinc and tin in June 1991, and launched the first standardized futures contract in China (since the 1950s) in aluminium in Oct 1992. In June 1991, the city of Suzhou launched the Suzhou Supplies Exchange (蘇州物資交易所, later renamed as Suzhou Commodity Exchange 蘇州商品交易所). The Shanghai municipal government established the Shanghai Metal Exchange (上海金屬交易所) in May 1992, and started the use of automatic order-matching computer programs to handle the trading orders (Suen et al 2005:66).

Table 3.1 Commodity exchanges (wholesale markets) in China by the end of 1993

Location	Exchange / Wholesale market	Products traded	Launch time
Beijing	China Construction Materials Wholesale Market	Construction materials	1992
Beijing	Beijing Timber and Forestry Wholesale Market	Timber and forestry products	1993
Beijing	Beijing National Chemicals Exchange	Chemical products	Apr 1993
Beijing	Beijing Petrochemical Exchange	Petrochemical products	Nov 1993
Beijing	Beijing Commodities Exchange	Agricultural products, metals, energy, petrochemicals, T bills	Nov 1993
Shanghai	Shanghai Metal Exchange	Non-ferrous metals	May 1992
Shanghai	Shanghai Petroleum Exchange	Crude oil, petrochemicals	May 1993
Shanghai	Shanghai Chemical Commodity Exchange	Chemical products	Mar 1993

Shanghai	Shanghai Coal Commodity Exchange	Coal	Dec 1992
Shanghai	Shanghai Food and Oils Exchange	Food and oils	May 1993
Shanghai	Shanghai Construction Materials Exchange	Steel, plywood	1993
Shanghai	Shanghai Agricultural Resources Exchange	Urea, Potassium chloride	Feb 1993
Tianjin	Tianjin Metal Exchange	Steel, cast iron	Oct 1992
Tianjin	Beiyang (Tianjin) Commodity Exchange	Metallic materials	Sep 1993
Dalian	Dalian Commodity Exchange	Corn, soybean	Nov 1993
Shenyang	Shenyang Metal Exchange	Metallic materials	Sep 1993
Changchun	Changchun Food and Oils Exchange	Grains	1993
Changchun	Changchun Commodity Exchange	Food, railway transportation price	1993
Harbin	Harbin Petroleum Exchange	Food, petroleum, T bills	1993
Zhengzhou	China Zhengzhou Construction Materials Exchange	Steel, cement	1993
Nanjing	Nanjing Petroleum Exchange	Petroleum	Mar 1993
Suzhou	Suzhou Commodity Exchange	Steel wires, silk	Jan 1992
Chengdu	Chengdu Meat Exchange	Pork, beef	Nov 1993
Chengdu	Sichuan Food and Oils Commodity Exchange	Food and oils	Nov 1993
Chengdu	Sichuan Metal Exchange	Metallic wires	1993
Chengdu	Chengdu Agricultural Trading & Wholesale Market	Information for agricultural production	Aug 1992
Chongqing	Chongqing Metal Exchange	Metallic materials	1993
Guangzhou	South China Commodity Exchange	Petroleum, rubber	1992
Nanhai	Guangzhou Steel Exchange	Steel	Aug 1993
Nanhai	Nanhai Non-ferrous Metal Exchange	Non-ferrous metals	1993
Shenzhen	Shenzhen Non-ferrous Metal Exchange	Non-ferrous metals	Jan 1992
Haikou	Hainan Chinese	Rubber, coffee, sugar	Nov 1993

	Mercantile Commodity Exchange		
Yantai	China Chemical Resources Market	Chemical products	1992
Jinan	Qi Lu Metal Exchange	Metallic materials	1993
Qinhuangdao	Qinhuangdao Coal Wholesale Market	Coal	1992
Inner Mongolia	East Mongolia Coal Exchange	Coal	Mar 1992
Lanzhou	Gansu Non-ferrous Metal Exchange	Non-ferrous metals	1993

Sources: Suen, Zhu and Shi (eds.) (2005) P. 67-68; Suen Shangqing (1994)

Report on the Development of Chinese markets, China Development Publishing

Before the central government could clarify whether commodity futures markets were capitalist or socialist and how regulation was going to be administered, dozens of provincial and municipal governments jumped onto the bandwagon to establish their own futures exchanges. Table 3.1 is a list of 33 futures exchanges launched before 31 Dec 1993, trading seven categories and over 50 commodity futures products (Suen et al 2005: 67-68, Shen 2003: 128). By mid 1994 the number of futures exchanges established throughout China was estimated to be over 60 (Yao 1998: 112), and Shen (2003) quoted “authorities” who estimated that the number of wholesale markets with forward and futures activities was probably over 1,000 (Shen 2003: 128). More than 50 commodity futures products were traded, including perishable and small-scaled products from “beans to beer, T-bills to pork bellies” (Yao 1997:113); some products were difficult to standardize, such as charcoal, Chinese herbs, seafood, water melons and potatoes (Suen et al 2005:74).

Due to the lack of sound legal and regulatory framework, the following 3 years (1991-93) saw a proliferation to 50 futures exchanges in China... that was equivalent to all the futures exchanges in the world combined... the same product was often traded on a number of exchanges resulting in confusion, contracts were not standardized and were often completed on unreasonable terms, and exchanges were operating without appropriate management (in particular, risks management) systems. The market was, to say the least, disorderly.

(CSRC 2004:32)

Many of those exchanges sat in the same city and traded the same commodities. For example, Shanghai City had seven commodity futures exchanges; Sichuan province had five futures exchanges; two futures exchanges sitting in Tianjin City both specialized in metal futures; one building in Beijing housed two futures exchanges, each occupying a different floor, and petroleum oil futures were traded on the competing upper floor and lower floor; and copper futures were traded on five futures exchanges.

(Yao 1997: 112)

Apart from Zhengzhou Commodity Exchange which charges a commission fee of 1.5/10000, most of the new exchanges charge for commission fees around 1/1000 [of the transaction amount]. No wonder after a provincial director visited an exchange in Shanghai, he made a request to all his subordinate departmental heads:

"When we return home, every one of you have to launch a new exchange from your department!"

Shen (2003:128) quoting *Economic Reference* 《經濟參考報》 1

Feb 1994, my translation

Suen et al (2005: 69-72) pointed out that at this stage, futures exchanges were usually constructed by a joint venture between the State Council, local government, and relevant industry enterprises. Since the leaders of many exchanges came from public bureaus without formally detaching themselves from governmental bodies, power often "infiltrates" into the organizational structure of the exchanges. In some cases the military and police units took part in organising futures brokerage firms, and some organisations made use of public funds to engage in futures trading – losses were recorded by the public account, but profits were recorded as private gains. The various exchanges had different rules and regulations in memberships, margins, fees and liabilities, resulting in regional differences and confusion. There were far more speculators than hedgers in the markets, resulting in high volatility of prices and weak correlation with spot fundamentals. According to Suen et al (2005), all the exchange members were trading members only, but ownership and management did not belong to the futures companies. Most of the exchanges adopted the organizational structure of "vocational legal person" – they were financed by governmental units, and their leading positions were appointed by the state. Occasionally a few exchanges adopted a shareholding organization (e.g. Beijing Commodity Exchange, Hainan Chinese Mercantile Futures Exchange), or the "corporate legal person organization" (e.g. Shenzhen Non-ferrous Metal Exchange), where enterprises took a greater role in the ownership and organization structure of the exchanges.

3.5 The Private Sector

The state-led futures exchanges took the lead, and futures companies in the private sector quickly followed. Established in Sep 1992, Guangdong Wantong (廣東萬通)

was the first futures brokerage firm of China in the 1990s (Suen et al 2005: 68). In Dec 1992, twelve of China's powerful state-owned commodity trading enterprises (including China Grain Trading Co., China Cereal and Oil Trading Co., and China Material Trading Co.) organized China International Futures Corporation Ltd. (CIFCO, 中國國際期貨經紀公司) (Yao 1998:111). In mid Dec 1993, CIFCO obtained the statuses of non-clearing member of the Chicago Board of Trade (CBOT), the Chicago Mercantile Exchange (CME), and the New York Mercantile Exchange (NYMEX) (Suen et al 2005: 68). CIFCO was chaired by Tien Yuan (田源), a US-trained PhD in economics, who left his job as the head of the futures research working group of the State Council's development research centre since 1988 for the private sector. The novel written by Liu and Yan (1999) described Tien's move from a prestigious state cadre position to join the private sector as an unprecedented shock and a "wow" factor to commoners in the market.

"Oh this person Tien Yuan. He got direct orders from Li Peng to research in futures. He started in 1988. Do you know who is Tien Yuan?...Director of the Research and Development Centre of the State Council! American-trained PhD, not yet reaching the age of 40, cadre of the ministry rank!" Wang said in a firm voice, and everybody listened with great respect. "Guess what, he resigned and founded a futures brokerage company, CIFCO... You look up history, where can you find a ministry-grade cadre that had resigned before. If this futures thing is not really great, how would Tien Yuan resign?" ... Wang's audience were deeply convinced by his 'analysis'. This futures thing is something wonderful. It will give loads of profits! If a ministry-ranked cadre with an American PhD decided to step down to conduct futures business, what are we waiting for?"

Liu and Yan (1999: 17-18), my translation

Futures companies in the private sector quickly flourished within the following 1-2 years. The single province of Guangdong had over 100 futures brokerage companies. The total number of futures brokerage firms went over 500, 200 of which were not registered with the State Administration of Industry and Commerce (SAIC) (Yao 1998). Out of the registered 300 firms, 50 were joint venture companies specialized in futures trading on foreign markets. These joint venture companies were usually

controlled by domestic para-governmental bodies, and had the foreign partners responsible for daily operation. They had extensively obtained domestic capital to speculate on currency, stock index and commodity futures in the US, the UK, and Japan (Suen et al 2005: 68-69). From 1992 to 1993, the number of practitioners in the futures industry rose from under 10,000 in 1992 to 135,500 in 1993 (Shen 2003: 129); the number of futures contracts traded rose from 200,000 to over 1,000,000 (Suen et al 2005: 72).

3.6 “Event 327” and Stringent Regulation

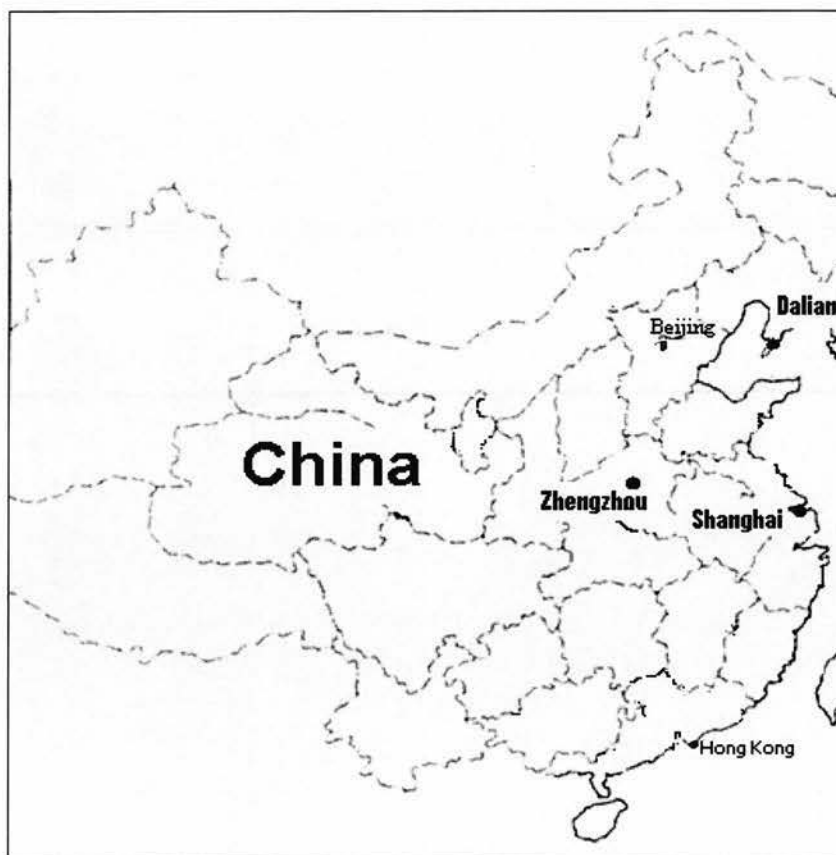
In Nov 1993, the State Council promulgated the *Circular on Resolutely Putting an End to the Blind Proliferation of the Futures Markets* (Futures Power Enabling Circular 關於制止期貨市場盲目發展的通知). The policy was enacted in May-June 1994, exercising a set of regulatory procedures that consolidated the number of futures exchanges from over 50 to 15, downsized 500 brokerage firms down to 170, and pruned off 20 futures products such as steel, sugar, rice, coal, gasoline and bonds. The products were banned from trading due to “severe inflation caused by over-speculation”. Trading foreign futures products were altogether banned, with a small exemption list of two dozens of large state-owned commodity enterprises only. On the remaining 15 exchanges, only 35 products were allowed to trade; all new products had to be approved prior to trading (Yao 1997:116, Suen et al 2005: 74-76). Measures were imposed on the regional exchanges to detach from local governmental units, to prevent corner events, to enforce settlement and margin requirements, and to enforce penalties on rule breakers.

Despite the regulatory efforts in 1993-94, in 1995 a scandal known as “Event 327” occurred on the Treasury bond futures market in the Shanghai Securities Exchange. The incident took place on the futures contracts No. 327, whose underlying asset was a Chinese Treasury bond issued in 1992 with a par value of 100 renminbi, coupon rate 9.5%, and maturity date in June 1995. The Shanghai International Securities Co. Ltd. (SISCO, 萬國證券) (majority owed by the Shanghai

municipal government) was betting a declining market on contract No. 327, because SISCO got information that Beijing was going to issue 150 billion yuan in T-bonds. However, to the surprise of SISCO, on 21 Feb 1995 the Ministry of Finance announced that two-thirds of the bond issuance would be shelved. On 23 Feb 1995, the Liaoning Guofa Co. Group Ltd. (遼國發, owned by local financial institutions in the northeast province Liaoning) and the China Economic Development Trust and Investment Co. (中經開 CEDTIC, owned by the Ministry of Finance) switched from short to long positions. Others followed suit. To struggle against the rising prices of futures contract No. 327, within the last 8 trading minutes on 23 Feb 1995, SISCO shorted bond futures worth 1,460 billion yuan (about US\$180 billion; another versions says 211 billion yuan, US\$26 billion), equivalent to one-third of China's GDP in 1994. Prices were driven down to turn SISCO's position from a loss of 6 million yuan to profits of 1 billion yuan, but the regulators decided to roll back all the trades made in the last 7.5 minutes of the trading day. To make matters worse for SISCO, on 25 Feb the Ministry of Finance announced that the coupon payout rate of the underlying T-bond would be raised from 9.5% to 10.38%, and the repayment of principal and interest on each par value of 100 yuan would be raised from 128.5 to 148.5 yuan. With a debt of US\$120 million mostly owed to the Industrial and Commercial Bank of China (ICBC), in Apr 1995 SISCO was merged with Shanghai Shenyin Securities Co. Ltd. (上海申銀證券), majority owed by ICBC, to become Shanghai Shenyin International Securities Co. Ltd. (SSIS 上海申銀萬國證券). Two years later in Feb 1997, Guan Jinsheng, leader of SISCO, was accused of seemingly irrelevant corruption charges in 1992-94 and sentenced to a 17-year terms of imprisonment; he was released on bail for "medical treatment" in 2003. On the other hand according to Yuan (2002), CEDTIC, as the leader of the long factions, should have made approximately 7 billion yuan of profits out of Event 327. However, CEDTIC had rolled up a debt of over 7.6 billion yuan instead. Yuan and a few futures bloggers believed that the actual profits were reaped by someone working in CEDTIC through "rat trading" (老鼠倉 *laoshucang*. See Appendix 2).

Event 327 revealed the potential of China's new derivative markets to be used as a battlefield between various capital factions, who were backed by state and regional political power units, leading to clashes between political groups. The aftermath of Event 327 was that, the parties involved were alleged for inappropriate use of public funds, breaking formal volume trading limits, and trading on insider information. Similarly, a series of other corner events also appeared on commodity futures products throughout the country (for a detailed list, see Chapter 5). Eventually, the then Vice Premier Zhu Rongji (朱鎔基) called for greater supervisory and law enforcement. In a few months' time the regulatory framework was restructured, a new China Securities Regulatory Commission (CSRC) was formed, and bond futures were altogether suspended from trading. In Feb 1996, the State Council and the CSRC tighten the use of public funds from state-owned enterprises on futures markets. State-owned enterprises were only allowed to conduct futures trading to hedge on those commodities relevant to the enterprise's core business. In July 1996, the People's Bank of China announced that banks were strictly prohibited from futures trading, further shunning the sources of capital flowing into the futures markets (Yao 1997:103-106; Neftci and Menager-Xu 2006: 250-254; Zhang J. 2001; Li 2004; Wu 2006; Suen et al 2005: 80-81). (For further details on Event 327, see also the section about Guan Jinsheng, the leader of SISCO in Chapter 6.)

Fig 3.1 The three futures exchanges in China (1998-2006)



In Aug 1998, the State Council announced the *Circular on Further Consolidation and Regulation of the Futures Markets* (關於進一步整頓和規範期貨市場的通知), consolidating the existing 14 futures exchanges¹⁷ into three: Shanghai, Zhengzhou and Dalian (see Fig 3.1). The number of tradable futures products went from 35 down to 12 (see Table 3.2). The other 11 exchanges at Beijing, Tianjin, Shanghai (two out of three), Suzhou, Shenyang, Chongqing, Chengdu, Guangdong, Shenzhen, and Hainan had to be turned into wholesale markets or futures brokerage companies. In 1999-2000, the State Council launched a set of “administrative rules” for futures exchanges and futures brokerage firms. A compulsory qualification exam was established for all futures practitioners to remain in business; every futures brokerage firm had to meet a minimum registered capital of 30 million yuan (1.9 million pounds); and all futures brokerage firms had to undergo annual audits to keep their licenses. These measures were supposed to eliminate the weakest firms from the industry, and strengthen their capacity of risk management and operational resilience. However, shortage of capital sources and stringent regulation also implied low trading volumes and a tight period for business, especially for the years 1997-2002 (Suen et al 2005: 81) (see Fig 3.2).

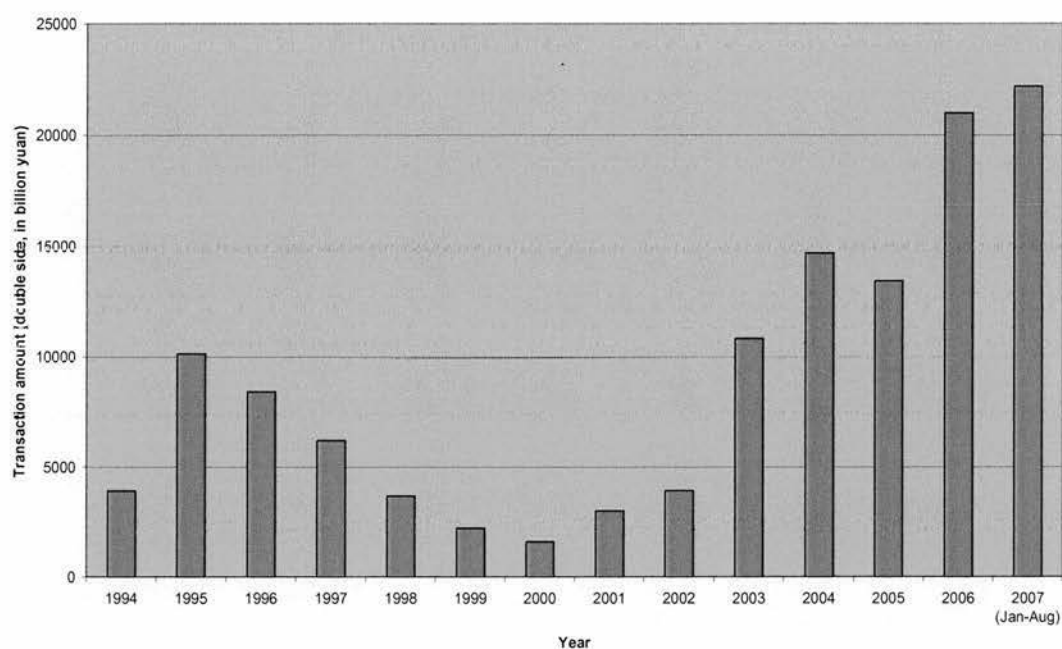
¹⁷ Due to problematic management, the delivery warehouses of Changchun United Commodity Exchange issued short warehouse receipts of corn without having corn in the warehouses. Prices were disrupted, and the exchange was forced to discontinue its operations in Oct 1995.



Table 3.2 Futures Products of the commodity futures exchanges in China (1998 and 2007)

Exchange	Authorized futures products (Aug 1998)	Futures products actually traded (Dec 2007)
Shanghai Futures Exchange (SHFE)	Copper, aluminium, natural rubber, sticky rice, plywood	Copper, aluminium, natural rubber, fuel oil, zinc
Dalian Commodity Exchange (DCE)	Soybean, soymeal, beer barley	Corn, No.1 soybeans, No.2 soybeans, soybean meal, soybean oil, RBD palm oil, LLDPE
Zhengzhou Commodity Exchange (ZCE)	Wheat, mung bean, red beans, peanut kernels	Wheat (hard winter white and strong gluten), cotton, sugar, PTA, rapeseed oil
China Financial Futures Exchange (CFFEX)	--- (Exchange officially launched on 8 Sep 2006)	Awaiting product launch: CSI 300 index futures

Fig 3.2 Total Transaction Volume of all the futures exchanges in China
(1994 -2007 Aug)



Note: Data for 1994-1998 is the total transaction amount of 15 futures exchanges. Data for 1999-2007 is the total transaction amount of the 3 exchanges DCE, SHFE and ZCE.

Sources: Suen, Zhu, Shi et al (2005) Analysis of the sector organization of China's futures industry; websites of SHFE, DCE, ZCE; China Securities and Futures Statistical Yearbook; China Futures Association.

3.7 Market Revival and new product offerings

Since 2003, the futures markets of China have been steadily reviving. Since 2004 the CSRC carefully and gradually loosened the grip, having approved four commodity futures within six months: cotton futures, fuel oil futures, corn futures, and No. 2 (GMO) soybean futures. Seven more products were launched in 2006 – 2007: sugar, soybean oil, PTA (a plastic), zinc, rapeseed, LLDPE (a plastic), and palm oil (see Table 3.3). Other futures product offerings being studied include crude oil, petroleum, power, steel, rice, Chinese T-bonds, and carbon quotas. Dalian Commodity Exchange had a trading volume of over 74 million contracts in 2003, and it had once become the third largest commodity futures exchange in the world (after the New York Mercantile Exchange and the Tokyo Grain Exchange).¹⁸ By trading volume in 2006, DCE was ranked 9th in the world's exchanges; Shanghai Futures Exchange (SHFE) was ranked 16th; and Zhengzhou Commodity Exchange (ZCE) was ranked 18th (see Table 3.3, FIA 2006). By transaction amount, in 2006 SHFE accounts for 60% of transactions in China's futures markets, DCE accounts for 25%, and ZCE took up 15% (Yang and Jin 2007).

¹⁸ Ranking excludes financial futures like index futures and bond futures.

Table 3.3 New futures products approved by the CSRC since 2004

New product	Exchange	Launch Date
Cotton	ZCE	1 June 2004
Fuel oil	SHFE	25 Aug 2004
Corn	DCE	22 Sep 2004
No. 2 soybean	DCE	22 Dec 2004
Sugar	ZCE	6 Jan 2006
Soybean oil	DCE	9 Jan 2006
PTA	ZCE	18 Dec 2006
Zinc	SHFE	26 Mar 2007
Rapeseed	ZCE	8 Jun 2007
LLDPE	DCE	31 Jul 2007
Palm oil	DCE	29 Oct 2007

Table 3.4 The ranking of world futures exchanges by trading volume in 2006**Top 40 Futures Exchanges***(Volume figures do not include options on futures)*

2006 Rank	2005 Rank	Exchange	2006 Volume	2005 Volume	% Change
1	1	Chicago Mercantile Exchange	1,101,712,533	883,118,526	24.75%
2	2	Eurex	960,631,763	784,896,954	22.39%
3	3	Chicago Board of Trade	678,262,052	561,145,938	20.87%
4	4	Euronext Liffe	430,037,882	343,829,658	25.07%
5	8	Mexican Derivatives Exchange	274,651,676	107,989,126	154.33%
6	5	Brazilian Mercantile and Futures Exchange	258,466,105	187,850,634	37.59%
7	6	New York Mercantile Exchange	216,252,995	166,607,470	29.80%
8	7	National Stock Exchange of India	170,571,964	116,286,968	46.68%
9	9	Dalian Commodity Exchange (China)	117,681,038	99,174,714	18.66%
10	14	ICE Futures (U.K.)	92,582,921	41,936,609	120.77%
11	15	JSE Securities Exchange South Africa	87,036,273	36,456,767	138.74%
12	10	London Metal Exchange	78,527,839	70,444,665	11.47%
13	12	Sydney Futures Exchange	74,204,335	60,091,807	23.48%
14	11	Tokyo Commodity Exchange	63,672,011	61,780,446	3.06%
15	13	Korea Exchange	60,169,114	57,883,098	3.95%
16	17	Shanghai Futures Exchange	58,106,001	33,789,754	71.96%
17	**	National Commodity & Derivatives Exchange (India)	53,278,108	51,547,081	3.36%
18	19	Zhengzhou Commodity Exchange (China)	46,298,117	28,472,570	62.61%
19	**	Multi Commodity Exchange of India	45,634,210	20,490,881	122.70%
20	16	OMX Group*	45,039,885	34,142,225	31.92%
21	20	Singapore Exchanges	36,201,370	25,867,661	39.95%
22	18	New York Board of Trade	32,746,692	29,013,416	12.87%
23	29	Tokyo Financial Exchange	31,508,764	11,057,134	184.96%
24	26	Osaka Securities Exchange	31,170,354	18,070,352	72.49%
25	22	MEFF (Spain)	29,037,068	24,884,965	16.64%
26	25	Montreal Exchange	27,578,059	18,240,633	51.19%
27	23	Tokyo Stock Exchange	26,957,702	22,630,719	19.12%
28	27	Hong Kong Exchanges and Clearing	19,863,299	13,433,386	47.87%
29	21	Tokyo Grain Exchange	19,106,247	25,573,238	-25.29%
30	28	Mercado a Termino de Rosario (Argentina)	18,053,184	13,051,248	38.33%
31	31	Taiwan Futures Exchange	14,006,287	10,107,749	38.57%
32	32	Budapest Stock Exchange	13,656,165	8,913,470	53.21%
33	30	Italian Derivatives Market	12,729,596	10,832,975	17.51%
34	24	Central Japan Commodity Exchange	9,019,416	21,949,566	-58.91%
35	33	OneChicago	7,822,465	5,528,046	41.31%
36	**	Turkish Derivatives Exchange	6,848,087	1,832,871	273.63%
37	34	Warsaw Stock Exchange	6,386,377	5,378,517	18.74%
38	37	Oslo Stock Exchange	6,044,271	2,359,161	156.20%
39	35	Kansas City Board of Trade	4,771,711	3,690,025	29.31%
40	36	Malaysia Derivatives Exchange	4,161,024	2,459,745	69.16%

Source: FIA

*Includes Stockholm, Helsinki and Copenhagen markets

**New additions in 2006

Source: Futures Industry Association

For over a decade, the scars from “event 327” made the CSRC extremely prudent about financial derivatives such as bond futures, index futures and options. In 2006, with the competitive pressure from Singapore and Hong Kong that these markets were interested to launch index futures products upon the stock markets of mainland China, the State Council and CSRC were finally willing to launch their own index futures within the domains of mainland China. On 8 Sep 2006, a new financial

exchange called the China Financial Futures Exchange (中國金融期貨交易所, CFFEX) was founded in Shanghai. Former general manager of DCE, Zhu Yuchen (朱玉辰), was appointed as its new general manager. At the time of writing (Dec 2007), the CFFEX's first financial futures product, CSI 300 index futures, is in "coming-soon" status. It will be an index futures product on the stock markets of Shanghai and Shenzhen.

Chapter 4

Methodology

To conduct ethnography in China's commodity futures markets, I was studying an "insider" community from the identity of an "outsider" (Merton 1972). Membership of the commodity futures industry of China is, to a large degree, achieved through work experience, training and social connections; inborn or ascribed attributes such as nationality, class and gender also had their influences (*ibid*: 15). In this research the insider/outsider boundary was three-fold: between academics and market people; between sociology and economics; and, between Europeans (where this thesis was formulated and assessed), mainland Chinese (where the field subjects worked and lived), and Hong Kong Chinese (where the researcher was born and brought up). Here discussion is focused on six issues surrounding the insider/outsider boundary: access, training, versions of disciplinary knowledge, orientalism, cultural essentialism, and power. The methodology discussion will then proceed to triangulation, ethical issues, and safety and health issues in fieldwork.

4.1 Access

Field access was the foremost challenge of this research, as the researcher did not have previous working experience in the industry, or any affiliated family background in China's political and business circles that could facilitate access. During Dec 2004 – May 2005 five to six channels were explored for access. My letters and emails requesting for direct help from the futures exchanges and Chinese academic institutes ended up with very limited success – I was never formally received by the Chinese Academy for Social Sciences, and I never got a reply for my letter to the research department of exchange P. In the first three months of fieldwork, I had discussions with people through informal channels from personal

acquaintances and industry conferences, but never managed to get official interviews or visits arranged by a local institution. At first a regional university in finance and economics in city P had kindly offered accommodation and other support for two months in summer 2005. However, within days of my arrival, on request after I submitted my curriculum vitae to their international office, the host institute seemed to decide that the previously mentioned research support concerning futures exchange P was to be silently withdrawn.¹⁹ Later on I found out from other field subjects the reason why I was not trusted: on my curriculum vitae, I did not hide the fact that I had worked as a Hong Kong newspaper journalist for seven years. Some people in exchange P suspected that I was a “commercial spy”. With the amount of time and effort I spent, they never believed that my purpose was purely academic. As I had nothing substantial to offer, they were unwilling to take up potential political risks from an unknown outsider. There was one small episode that illustrated my relationship with exchange P. On the last evening of my stay in city P, I attended a banquet for around 40 people as part of a five-day futures training course. To my surprise, a department head from exchange P took the initiative to sit next to me for dinner. She skilfully “appointed” me to toast on behalf of our table – which implied a considerable amount of alcohol intake, as most of my toasting counterparts were lofty men from the food and oils sector. After three rounds of heavy toasting, she smiled and asked me in a gentle voice, “Where do you come from, what are you actually doing here?” Mellow but not drunk, I replied honestly, “I am trying to write a thesis. I want to get a PhD degree.” She did not seem to be convinced.

Fortunately, bottom-up access from industry conferences and training courses turned out to be very fruitful. In 2005 there were a variety of conferences and training activities organized by the China Futures Association, the three futures exchanges, the futures brokerage firms, and the media organizations, with themes

¹⁹ I am still grateful to this university for providing me with safe and clean accommodation at a reasonable cost.

ranging from options on futures, risk management in the futures industry, and risks in the general financial industry (jointly organized with the banking sector). Most of these activities did not impose entry barriers on my identity. When I explained that I was a postgraduate student from the University of Edinburgh trying to learn about the commodity futures markets of China, most of these conferences readily accepted me as a participant, as long as I was able to pay a registration fee ranging from 300 to 800 yuan (£20 to £52). My first contact with the field subjects was a two-day workshop in Beijing, where I saw on the website of the China Futures Association that they were jointly organising the workshop with one of the futures exchanges. Without much difficulty I registered for the event, booked my flights and hotel room for one week in Beijing, and booked for another two months of accommodation in the aforementioned university of city P afterwards. An odyssey of seven months in the futures circles of China started. (Afterwards I had also taken part in three other open industry conferences held in Beijing and Shenzhen.)

The industry conference setting was an excellent starting point to gain access to the field. The 20,000 industry practitioners were a niche community geographically dispersed over the whole country. Unlike the stock people of Shanghai in 1992 (Hertz 1998), the futures people in 2005 could not be met in groups on the streets of Shanghai, Dalian or Zhengzhou. Conferences were good converging hubs to meet them, because these were occasions where the researcher could meet a mix of representatives from the public and private sectors, from different geographical regions, as well as brokers, traders and analysts specialising in different futures products. Better still, conference participants were a sample who were relatively keen to do networking, and curious to learn about new things around them. Under the conference setting, the researcher had ample opportunities to exchange business cards and initiate chats with other participants during tea breaks, over lunch, or after conference sessions. I got to know most of my 36 interviewees (see Appendix 1) in these conferences, including people working in futures exchanges, futures companies, industry associations, foreign banks, local journalists, and researchers in state statistic bureaus. Amongst all the interviewees, there were three particularly important “gatekeepers” (Whyte 1955) who gave me invaluable

help to make this research possible: Alpha, Beta and Gamma (pseudonyms). Each of them had widened my field access to a different dimension.

Alpha had not completed her high school studies, but she was a smart person who relied on her sharp intuitions, strong will and flexible social skills to survive in the markets in two decades of economic transitions. She had worked in the futures industry as a floor representative on three different exchanges, as part of a corner trading team in the late 1990s, and as a risk control officer in a futures company in 2005. I never figured out exactly why Alpha took interest in me. As an extrovert good at exploring new opportunities but never got a chance to travel outside the country, perhaps she was curious about my overseas and Hong Kong affiliations; perhaps she found me fun to chat with, or perhaps she was sympathetic about my odyssey status due to her own drifting life. Nonetheless in summer 2005, Alpha treated me as a friend and phoned me up from time to time. She was an energetic woman, often starting a phone call by telling me with zeal what was happening in the industry: market movements, new policies, upcoming conferences, and rumours about novel futures products. Sometimes she was in a nostalgic mood, and enjoyed telling me stories about her exciting past. During those months both of us roamed from cities to cities, and when we were in the same town we would meet up for meals and chats. I had learned a lot about the futures industry from her insider perspectives. Although I could hardly get any formal access to exchange P, it was Alpha who used her personal connections at the lower levels to help me gain alternative, informal access. I was introduced as “a good friend of Alpha” to a group of red jackets working on the trading floor of exchange P, therefore received as a friend to have lunch with them for several times; some of them accepted my invitation to conduct follow-up interviews, and some of them were able to walk me around different sections of the exchange. Alpha was also able to persuade somebody working within the exchange to allow me some low level access. In late 2004 to mid 2005, the exchange was running a mass education and marketing program called “Thousand Villages, Ten-thousand Doors” (千村萬戶工程), which was a series of two-day workshops to promote introductory knowledge and the use of commodity futures amongst farmers, food and oils companies, grass-root state cadres, and

trading companies. The large-scale project involved nearly 1000 classes, each having 40-60 participants. Owing to the help of Alpha, I was allowed to sit in these classes as a marginal member (Hammersley & Atkinson 1983:100), to conduct participant observation as many times as I liked. This gave me an invaluable opportunity to observe how members of the public (people outside the futures circles) reacted to the futures markets, and what kind of messages exchange P was trying to convey to the public. As I was never treated as a guest myself, this gave me more freedom to observe and move around from a more spontaneous, bottom-up perspective.

Beta was a senior member of staff working at exchange Q. He was someone whose English skills had reached fluent level, and he was frequently dealing with overseas collaborators in the futures industry. He was also actively engaged in writing academic papers and some translation work. By June 2005 when I met Beta for the second time in Beijing, I was already certain that it was impossible for me to get an internship from exchange P. As an alternative attempt I asked Beta if he would accept me to work in exchange Q as a summer intern, and he said yes – I got an internship for one month. I was lucky because in summer 2005, China's futures industry was not yet officially open to foreign markets or foreign companies. Unlike the banking sector, English was never an essential criterion in recruitment; in city Q it was even more difficult to recruit people who could use English at a proficient level.²⁰ Beta found that my language skills could be of some use, and in August 2005 I became one of the junior assistants working at exchange Q – I got a large volume of translation tasks on trading rules, edited books, abstracts for research papers, press releases, invitation letters, notices, and speeches. Sometimes when foreign guests visited the exchange, I had the opportunity to attend meetings, tours and banquets as a junior assistant. The internship was an invaluable ethnographic experience that

²⁰ The researcher is a competent translator and interpreter between Chinese and English. She has worked for two years fulltime translating international news in a Hong Kong daily newspaper, and two years part-time in Scotland for the NHS, city councils, the Sheriff Court, the Criminal Justice Department, and some whisky distilleries.

allowed me to explore the research department, meetings, the canteen, the trading floor, and the organisation culture of the exchange from the identity as a marginal member of staff.

Gamma was a deputy general manager of a medium-sized futures company in Beijing, and one of the first few futures people I encountered on my first industry conference. As someone who has received higher education and working at the management level, compared with Alpha, Gamma could analyse the futures markets from a more comprehensive perspective from industry structure, policy changes, and macro market environment of China and abroad. On the second day of my fieldwork, Gamma gave me a long interview for four hours, which gave me a good foundation about the market environment. Through the referral of Gamma, I got another internship at a futures brokerage firm in Beijing for two and a half months. There I could learn more about the life in a futures company and the electronic trading interface; I also got to know more analysts, traders and chartists there.

Before I started my fieldwork, I had prepared a document from the University of Edinburgh with my supervisor's references and signature, to prove my identity and the institutional background of my research if the need arises. The only instance that this document was inspected was when I was asking for an interview from a member of staff of exchange P. The document was inspected due to suspicion, and after examining it the attitude of my field subject did not change. On the contrary in situations where I was trusted, such as among the red jackets of exchange P, or during the internships in exchange Q and the Beijing futures company, my field subjects never asked for my identification or documents. I asked my supervisor at the Beijing futures company why he never asked for my ID, and he replied, "You were referred by Gamma. That is good enough." In the markets, trust and discretion were established upon a system of personal ties, reputation and favours; far less upon written institutional documents and certificates.

4.2 Training

A second problem from the insider/outsider boundary is, without undergoing the full training and socialisation process of insiders, is the researcher competent (Merton 1972:20, Hammersley & Atkinson 1983:81) to understand the ongoing activities in the futures markets? Before setting out for fieldwork, the researcher had read financial textbooks such as Hull (2000), Telser (2000), materials such as Fallon (1998), Yao (1998), CSRC (2004), DCE (2003), and newspaper articles to understand some basics of commodity futures and exchanges. After the start of fieldwork, the learning process continued as the researcher tried to read what the “locals” were reading: the *Futures Daily*, the Hexun futures portal (<http://futures.hexun.com/>), news delivered on the *Webstock* trading interface, and books such as Murphy (1994), China Futures Association (2007a and 2007b), Liu and Yan (1999), Xu (2004).

As China’s modern futures markets only had a short history of 13 years (as in 2005) and the market had a very limited variety in asset types and number of products, the range of professional knowledge varied widely amongst industry practitioners. Some senior analysts in leading futures companies, as well as the members of staff working in the research departments of the futures exchanges had a strong foundation of professional knowledge – some had doctorate degrees from China or abroad in finance and economics, some had working experience in foreign markets, and many were equipped with good knowledge of a full range of financial derivatives not yet allowed to be traded in China in 2005. However on the lower tiers, formal training was sometimes nearly absent. A young financial journalist specialized in futures reporting told me that, throughout his four-year undergraduate programme in economics in a good university in Beijing, there were only two pages of notes covering the topic of futures. Most of the time he had to learn everything from scratch in an *ad hoc* manner. Professional know-how was often circulated as a mixture of tips, heuristics, theories, rules of thumb, chartism graphics, folk knowledge, examination textbooks, and popular novels of market legends. The immersion in these materials was part of the ethnography, as well as part of the

training process that made the researcher a competent marginal member of the community.

During the stay in city P in July 2005, I had enrolled in an intensive five-day futures training course at a basic-to-intermediate level. The course was jointly organised by exchange P and the information software company Webstock, with classes conducted by ten experienced traders, analysts, and staff members of exchange P. The course took place at a training facility owned by a state-owned energy enterprise. Course topics included the basics of commodity futures, fundamental analysis, technical analysis, the commodity futures exchange, delivery, risk management, and trading heuristics. The course also included visiting tours to the trading floor of exchange P, as well as a designated delivery warehouse at Beiliang Port (北良港). On the last day there was a hands-on session of simulation trading, and a banquet dinner offered by exchange P; all participants received a completion certificate. There were 30 students on the training course. 25 of them were managers from food and oils, animal feed, trading, or port logistics companies. The other four were retail investors, including a veteran soldier and a housewife. There were 20 males and 10 females. Participants came from dispersed geographical areas: P[7], Q[2], R[3],²¹ Heilongjiang[5], Jilin[2], Shandong[2], Inner Mongolia[2], Jiangsu[1], Jiangxi[1], Sichuan[1], Shaanxi[1], Shenzhen[1], and Hong Kong[1, me]. Many food and oils company managers were males in their late forties or early fifties. We also had two fresh graduates who worked as young analysts in Shanghai, and a young lady who was the heir of a rich and politically influential family. Besides receiving the local version of futures training myself, the course was a good opportunity of participant-observation. Although the sample of field subjects there were not a random sample fully representative of the overall markets, its demography reflected the heterogeneous make-up of the commodity futures markets in 2005.

²¹ P, Q, R are where the three futures exchanges were.

4.3 Disciplinary boundaries

There is tension between the versions of knowledge in finance / economics and sociology / anthropology. Occasionally when some field subjects knew that I was doing a doctorate degree in a UK university “about futures”, they expected that I should know a lot about quantitative finance and macroeconomics. To ease my embarrassment, sometimes I would tell them that I was studying “sociology of markets”, which is “something similar to behavioural finance”. That was a pragmatic answer that I could think of.

The field subjects and the researcher had different frames of reference in terms of concepts, foci of interest, and symbols. For example in the Beijing futures company when I was trying to summarize the price movement of soybean futures in a morning, I was imitating the information sources, tones, terminology, and concerns of my field subjects. At the same time as an ethnographer, I was also aware of issues such as the collection, processing and propagation of information along specialized channels. If I failed to understand the language of the locals, she could not understand what was going on. On the other hand if my viewpoints were totally “localized” (equivalent to an abductive research strategy, Blaikie 2000: Ch 4) with the analysts and traders, I might miss the initial objectives set out by the research topic. The challenge was to maintain a dual frame of reference, where the role of the researcher was more like a “mediator of languages” and a “dialogic facilitator” (Blaikie 2000:52).

4.4 Orientalism

This research originates from a theoretical standpoint of “social studies of finance” in a British University, while the target of study was China’s futures industry. As a Sino-British cultural frontier is involved, the issue of orientalism (Said 1985) deserves some discussion here. Edward Said used the term orientalism to question how Asia has been studied, discussed, represented, and imagined by Eurocentric

discourses. The discourses were “a grid filtering the Orient into Western consciousness” (Gran 1980) that was gradually accumulated over the 18th and 19th centuries, during an era when Europe had strong colonial and imperial interests in Asia. Most of the time Said referred to examples from the Middle East, but the Near East and the Far East were in a comparable position. Through this cognitive grid, Europeans see the Orient as a backward, docile and exotic land, carrying ethnic cultures and natural resources, awaiting the exploration and discovery by the “more advanced” European civilizations. Said employed Michel Foucault’s concept of “the Other” to portray this cultural projection: “the Orient is anything that the Occident is not.” By creating polarized cultural attributes, the Occident was actually establishing its own identity by talking about the Orient on the opposite end of the polarized cultural axis. This projected image of the Orient is a mixture of romantic imagination and hegemonic control; it was also a distorted picture from how Asians actually lived and worked on their own land.

Asian Studies as a body of knowledge in western societies has its heritage from an older version that is closely associated with orientalism. While it was not practical to discard the whole body of knowledge solely due to issues of orientalism, it will certainly be helpful if the modern researcher is aware of potential problems. Area research from a western university should not be a hegemonic discourse that objectifies its field subjects, pushing them to a status dispossessed of their own voice. When conducting market comparisons, are such comparisons done in a manner to achieve exploitation, control and wealth redistribution? The researcher should be aware that in the 21st century, such control is not necessarily imposed in the old form of political and military control. Such discourses are more likely to appear in a liberal economic front, for example, in the name of free market economy and globalisation. Since orientalism resides in a body of knowledge over a prolonged period of time, its influence has diffused across racial, disciplinary and geographical boundaries. Both European and Asian researchers in modern times are prone to see society through this filtering grid (Gran 1980), regardless of the researcher’s race and cultural origins. Being Asian does not necessarily exempt the researcher from its influence.

The researcher should be sensitive to questions like, are market attributes represented on a simplistic and polarized axis, exaggerating the Occident-Orient contrast?²² Is ethnography conducted in the form of “research tourism”, only highlighting the exotic elements of the indigenous area that is different from the researcher’s own environment, without addressing to more core issues of the research? When applying western theoretical framework on Asian cases, attention should be drawn to the local context and the country’s economic history. For example, Alkrich’s concept of technology transfer (Alkrich 1992) can be applied to China’s introduction of futures markets from the Chicago model; but futures markets in China also had their own line of history from the Qing dynasty in the late 1800s, through communist times to post-communist times (see Chapter 3). The local context should not be totally ignored. Last but not least, the version of knowledge derived from research work should be compatible, and not distorted, from the factual reality how field subjects live and work in the markets. Kapp (1980) mentioned a test that could show whether the researcher is weaving some knowledge that purely exists in her orientalist imagination. If the research report is translated into the local language and read by the field subjects, at least the findings should be factually acceptable to the locals. It should not be a fabrication that is constructed solely to appease a western academic audience, with little substance that represents the actual market and people being studied. To carry out the test, the researcher intends to draw part of this submitted thesis and submit to some academic journals in Chinese.

²² Examples of polarized, exaggerated attributes: Marcel Mauss (1954) portrayed gift economies in village societies (e.g. Melanesian societies) and commodity economies in western societies as two dualistic forms (Arkush 1997); Fei (1948) described differential mode of association as a “Chinese” property, while the organisational mode of association as a “western” attribute (see Chapter 2).

4.5 Cultural essentialism

Another problem that arises from the Sino-European boundary was cultural essentialism. During fieldwork I often came across the discourse of “Chinese characteristics” (*Zhongguo tese* 中國特色) and “China factor” (*Zhongguo yinsu* 中國因素). When the *Financial Times* writes about “China factor”, the term basically refers to how the supply, demand, or capital flow factors associated with China exert influences on global market conditions such as freight derivatives, commodity prices, and stock prices (see Oakley 2007, Chung 2007, Bergsten 2006). In its simplest meaning, “China factor” recognizes the existence of local factors, which can differ from the overall global conditions.

When used by domestic futures people, I found the term “Chinese characteristics” bundled with a mixture of ambiguous meanings that deserve some clarifications here. Sometimes the market people used the phrase “constructing futures markets with Chinese characteristics” (建設具中國特色的期貨市場) to express nationalistic sentiments and resentment against foreign imperialism. On private discussions, some field subjects related their attitude to the economic history of 1870-1945 (when domestic markets were heavily controlled by colonial powers, see chapter 3), or the hegemonic control of Third World economies by the International Monetary Fund (IMF) in recent decades – from a perspective of political economy, this was a valid precaution grounded upon issues of power and national interests. The discourse could also be entangled with official political propaganda, as the verbatim was adopted from former state leader Deng Xiaoping’s political directive in 1982: “to construct socialism with Chinese characteristics”. In speeches in industry conferences, the phrase “construction of futures markets with Chinese characteristics” could be read as a supportive statement towards the state’s economic directives.

“Chinese characteristics” can also have a third meaning related to cultural essentialism – that Chinese markets are essentially different from markets elsewhere. Some field subjects adopted a strong form of essentialism and believed that it was

impossible for any foreigners to gain genuine understanding of China's markets. Some field subjects emphasized that "Chinese characteristics" and "situations of the country" (*guoqing* 國情) were beyond the grasp of outsiders. Only Chinese, by virtue of our ascribed identity, have the rights to claim for better understanding about Chinese markets. The first two meanings of "Chinese characteristics" are understandable in their respective context, but this third meaning is a problematic attitude that deters communication and understanding about markets. Merton (1972) has made a clear argument why such claims should not stand any for social groups in general. While outsiders are likely to be hindered by cultural gaps and foci of vested interests, it was also likely for insiders to be influenced by biases such as a myopic perspectives (*ibid*: 44), or the aggrandizement effect – that is, overestimating the prestige of one's own social group (*ibid*: 17; Caplow 1964: 213-216). Given enough training, exposure and insights, competent knowledge is attainable by both insiders and outsiders.²³ "Chinese characteristics" indeed exist for Chinese markets, just like Russian, Indonesian, Italian, American, and French characteristics exist in the respective markets. Nonetheless local characteristics should still be eligible to the analysis, discussion, comparison and understanding by insiders and outsiders alike. In fact, fuller understanding is more likely to arise from the synthesis of the perspectives of both insiders and outsiders (Merton 1972: 36-44). The researcher is aware that, being racially Chinese does not guarantee a better understanding of Chinese markets. In the light of the diasporic paradigm when multiple Chinese markets (mainland China, Taiwan, Hong Kong, Singapore, and overseas Chinese) are taken into account, what constitutes "Chineseness" is constantly shifting and drifting (Ang 1998). It is impossible to obtain a single orthodox definition of "Chinese characteristics" of "Chinese markets" based on cultural essentialism.

²³ During fieldwork, I had come across some foreign investment bankers who showed exceptional understanding about the commodity futures markets of China.

4.6 On the Margin: Hong Kong Identity

On top of the Sino-British boundary issues discussed above, the researcher's identity as someone born and brought up in Hong Kong introduced both convenience and disadvantages to this project. At the first instance, access to formal institutions seemed to be more difficult because I was never received as an academic from "overseas". After more than three decades of close interactions with Hong Kong and the city's handover back to China in 1997, mainlanders were no longer curious about Hong Kong people. Worse still, I was only a postgraduate student without any academic position or titles; hence I never got official receptions, briefings or arranged visits as an "international guest". As described in the Access section, I had to figure out how to improvise other access channels to the field by informal, bottom-up ways.

A Hong Kong identity had some merits for an ethnographer. I was entitled to travel in mainland China without having to apply for a visa. Unlike foreigners (especially whites) who could still attract a lot of attention and excitement in small and medium cities, the locals were far less conscious about my presence, and far less curious about what I was doing. If I did not expose my southern accent, I could "blend in" amongst crowds, industry meetings and office settings (Hammersley & Atkinson 2001:78-83), minimizing the amount of disruption (Hughes et al, 1994) and alarms.

While I did not get the honourable treatment as a special guest, usually I was not cosily trusted as a real local either. There were remarkable differences between my field environments and Hong Kong ranging from spoken dialects, Mandarin accent, systems of written Chinese characters, Chinese keyboard input methods,²⁴

²⁴ Mainland China has switched to a system of simplified Chinese characters since the 1950s, while Hong Kong is still using traditional Chinese characters. Most Chinese typists in mainland China used

food and diet, to more subtle differences in social life and values – such as how to stand in a queue or how to use traffic lights. In the far north, the accent differed so much that I had been mistaken as a Korean for multiple times, and one colleague in the Beijing futures company who had never come across my keyboard input method thought that I could not type or write in Chinese. These differences may seem small compared with those faced by European ethnographers in China. Yet they were significant enough to give me a position where I could neither enjoy the benefits of a foreigner, nor the benefits of a “real” local – as compared with other interns who came from the local city. It was an identity that was grossly on the “inside” of the nation, yet never fully localized throughout my period of stay. During fieldwork, the intermediate status between insider and outsider was never a comfortable or relaxing position to be in; in self-taunt it is like the “valley of death” in marketing, where a product with bad market positioning strategy is unlikely to sell well. Nonetheless, looking back with hindsight, my peculiar position between insiders and outsiders was actually an ideal one to keep a balance between understanding the insiders’ perspectives, and maintaining a reflective sensitivity to make enquiries about existing practices in the field.

4.7 Triangulation

The data of this research is triangulated from ethnographic fieldwork of two internships, participant observation of four industry training courses / seminars, three industry conferences, 33 semi-structured interviews, and documentary analysis of industry publications. For a list of events and interviews, see Appendix 1.

a keyboard input method based on alphabetical phonetics, while I type with the Taiwanese “Changjie” (倉頡) input system based on character strokes, which was not installed at my internship offices.

Ethnography: internships

Ethnographic fieldwork was conducted in the form of internships at exchange Q and a futures company in Beijing. The researcher went to work in an office setting at normal working hours, and was immersed in the industry environment. By interacting with colleagues and taking up some work at the junior level, I had the opportunity to understand the futures people's nature of work, group interactions, identities, values, lifestyle, employed tools, code of dress, and etiquette in the profession in details. Field notes were recorded as early as possible on hardback fieldwork diary in chronological order, which were later on developed into actual chapters of the thesis. In addition to the text-based fieldwork diary, alternative forms of data such as photographs, floor plans, market charts and conference materials such as cartoons provided additional information (Payne 1996) about the markets. The ethnographic data was strong from the perspectives of institutions, culture and organizations. It was weaker in terms of the actual actions of trading, because from the physical sites of internship locations I could hardly observe how the actual trading took place. Nonetheless, up till now there are fewer than ten studies in the field of social studies of finance that have employed some form of market ethnography. This study will contribute to the field by providing scarce ethnographic field data.

Participant observation: training courses and conferences

Internships allowed in-depth interactions and understanding over a longer period of time, but they were constrained in terms of the scope of reach. The problem of representation could be partly complemented by conducting participant observation in industry conferences and training courses, because in these industry events a high volume of human interactions, information exchange and social networking took place within a condensed period of time and physical location. By attending industry conferences, the researcher was able to grasp a wider scope of industry agenda, and be exposed to a wider circle of industry figures. As discussed in previous sections,

these events were the primary source of access channels and training opportunities for this research.

Semi-structured interviews

36 interviews were conducted in May – Dec 2005 in six cities: P, Q, Beijing, Tianjin, Hong Kong, and Shenzhen. As shown in Appendix 1, the interviewees included the following field subjects: members of staff of futures exchanges, futures brokers, futures analysts, futures traders, trading floor representatives, chartists, financial journalists, people working in the food and oils sector, representatives of an information and software company, member of staff of the industry association, and academics. Depending on their roles in the industry, the interviews were semi-structured around the interviewees' personal career history, their knowledge about the markets, and their opinions about the industry. An interview lasted from 20 minutes to 4 hours. Interview data were recorded as shorthand notes in steno notebooks, and some of them, when possible, were digitally recorded. The interview records were quoted in the later chapters.

Documentary analysis

Amongst various documentary data used in this study, the use of two “documentary fictions” about China’s futures markets needs some discussion. *Who is the Sweepstaker* (Xu 2004) was written by a female futures broker based on stories surrounding the Suzhou futures markets,²⁵ while *The Epoch of China’s Futures Markets* (Liu and Yan 1999) was based on interviews with key persons surrounding the Zhengzhou markets. As fictions, the events and characters referred by these books were a mixture of real and fabricated components, and they should not be taken literally as ethnographic field records for the purpose of academic research. However, the two books illustrated in great details how aggregates of *dahu* (big

²⁵ Closed down in 1998.

players) manipulated the futures markets in the 1990s, and some of my field subjects verified that they were accurate illustrations of the generic market environment during the 1990s. Another perspective to read the two books is that, the books were circulating in China's futures markets as part of the discourse to construct a professional identity.²⁶ While the authors may have introduced political, professional and personal standpoints in their narrations, such books were part of the discourse that futures practitioners in China perceived themselves and what the markets were about. The data complemented an earlier period of time before this research was conducted, and provided details about sensitive events (e.g. corner events) which was difficult for the researcher to witness.

Other documentary data used in this study include government reports, analyst reports, training course materials, the *Futures Daily*, Hexun.com.cn and other Chinese futures websites, newsfeed from the Webstock software, and publications from futures exchanges, brokerage firms and live feed information providers. A number of useful reference items on the history and contextual background of China's futures markets (see chapter 3) were accessed from the Chinese academic journal portal Wanfang Suju (萬方數據, <http://www.ilib.cn/>), and by visiting the main library of the Chinese University of Hong Kong.

4.8 Ethical issues

Informed consent

During seven months of fieldwork, the researcher was in contact with hundreds of field subjects. From a perspective of social science research ethics, it would be ideal to communicate with every field subject about the "purpose, methods and intended

²⁶ The books were introduced to me by colleagues during an internship, as well as by classmates on the five-day futures training course in city P.

uses” (Kent et al. 2002) of this research, so as not to constitute an element of deception (Babbie 1995). In reality, informed consent could only be sought within the limits of practical feasibility – for example, in a two-day conference with over 400 participants, it was impossible to attain a high level of informed consent. For close and direct contacts such as gatekeepers, co-workers in the same unit, and most of the interviewees, I disclosed that I was a social science postgraduate student from the University of Edinburgh, who was trying to learn about the futures markets of China by *diaoyan* (調研, a generic term for social science research), and I was going to write a doctoral thesis about this. For those who were interested, I communicated more about my research questions and methodology. Usually I used the word *diaoyan* instead of “ethnography”, because *diaoyan* was widely understood by the public. The term ethnography was used for those who had academic background. For casual and transient contacts (such as fellow attendees in a conference), or in situations where I would like to avoid causing alarms (such as the introductory futures classes for farmers and rural cadres), I had only explained that I was a postgraduate student who was studying the futures markets of China. Since many of the field subjects were unaware of the data collection process, the researcher could cause harm if the subjects are embarrassed by the data at a later stage, or if the data lead to institutional sanctions. Potential damage could be reduced by carefully anonymizing the subjects in theses, papers and presentations.

Confidentiality and anonymity

To preserve the privacy, confidentiality and goodwill of field subjects, the names of individual persons and organisations had been anonymised. Not only names were concealed, but some details that lead to identifying the field subjects and their institutions (such as places and physical features) were also altered. The purpose is to give a generic and genuine portrayal of the commodity futures markets in China, without causing pressure or sanctions to particular field subjects. Meanwhile in order to protect the gatekeepers, the researcher has applied for restriction of access of this thesis from the university library.

Controversial practices

Chapter 6 records the market making system of exchange Q, which lies in a controversial grey area without getting formal approval or disapproval from the regulatory body. There is a dilemma between withholding the materials from the thesis to protect the confidentiality and goodwill of the organisation, and to provide an honest record for the interest of the markets and a wider society. A compromise is made in this thesis: the name of the organisation and relevant parties were anonymised, but the practice was recorded, so as to illustrate the properties of network-based rationality in the field.

4.9 Issues of health and safety

For the second internship in Beijing, I was offered accommodation in the company's staff quarters, sharing an apartment with two male colleagues. For the sake of ethnography it was a good opportunity to interact with housemates and learn more about the lives of futures people. However, being exposed to field subjects 24 hours a day without any space of retreat could also cause considerable amount of stress. The flat was very dusty and filled with heaps of old computers and old clothing, which were beyond my cleaning abilities. After living there for three weeks (21 Sep to 11 Oct), I was suffering from allergic rhinitis, and found myself sneezing non-stop for four to six hours every day in the morning. Eventually I decided to move out from the apartment and rented a private apartment instead. Although exposure to the field had been reduced, there were moments that the researcher simply had to admit one's own physical and psychological limitations. For prolonged periods of ethnographic fieldwork, to work in a sustainable way, issues of health and safety also have to be addressed.

Chapter 5

Cadres: State Structures in the Markets

5.1 A Vertical Hierarchy

Stepping into the futures markets of China in 2005, one could quickly identify four sectors: state regulatory officials, foreigners (industry counterparts and bankers), the brokerage firms, and investors. There was a clear sense of hierarchy according to the above order. In one industry conference I attended in Beijing, the four sectors were banded by seating plans and colour badges into groups A, B, C and D, where the first two groups got the premium seats. The order was usually observed when speakers addressed their audiences in speeches; when the media presented their news headlines; and when contributors' articles appeared in publications.²⁷ A field subject from the Futures Industry Association of China once explained to me, "It took us a few years to get our market structure right – the CSRC (China Securities Regulatory Commission) *guans* (管, governs) the three exchanges; the three exchanges (and we the association to a certain extent) *guan* members of the exchanges; the member firms *guan* their clients."

²⁷ Foreigners might be placed before or after exchange staff, depending on company size and reputation.

Fig 5.1: How brokers and industry associations of China's futures markets perceived the market structure

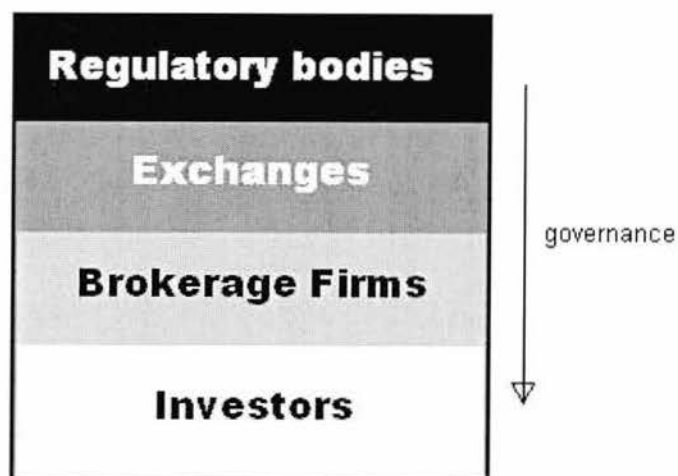


Fig 5.2: How the Hong Kong Stock Exchange presented their market structure to the local media



While staff members from industry associations presented this vertical line of power and governance (see Fig 5.1) as an achievement,²⁸ the same hierarchy could be observed in Exchange P from the organization of material space, income distributions, and the perception of identities. Walking around the building of Exchange P, one could quickly sense an air of status division embodied in the physical space. The building had two wings stretching in an arc running east and west from a central foyer (Fig 5.3). G/F and the foyers were open for public access. The rest was segregated into the lower floors (basement, 1/F, 2/F east wing) for around 300 red jackets of the member firms, and the upper floors (2/F west wing, 3/F) for 140 staff members of the exchange. On the lower floors, a typical red jacket who worked on the 1/F trading floor earned around RMB 800 – 1,400 (£53-93) a month. Her local manager, who might come to the 2/F east wing offices from time to time, earned around RMB 2500 – 8000 (£167- 533) a month. On the upper floors, a mid-level exchange staff member working in marketing or research earned around RMB 15,000-40,000 (£1,000-2,667) a month. Most of the time the two sectors worked in separate space,²⁹ ate separately,³⁰ used separate lavatories, and there was an immense social distance between them. The red jackets would have lunch at the basement fast

²⁸ Exchanges and regulators in Hong Kong (e.g. in the finance and telecom industries) usually present their “market structure diagrams” with private firms occupying a central space where competition took place (Fig 5.2). The public and quasi public institutions tended to draw their own organizations modestly on the side, indicating that their job was to provide regulation and supporting infrastructure. They would use words like “partnership”, “cooperation” “support”, or “check and balance” on the public-private interface. As Hong Kong, Taiwan, and the Chinese faction of Singaporean markets were Chinese societies with market perception different from Fig 5.1, I would argue against the cultural essentialist opinions that Fig 5.1 was “unique characteristic of Chinese markets”.

²⁹ They still got in touch and worked together in issues like margin maintenance, clearing and delivery.

³⁰ In the 1990s the red jackets could also eat in the same canteen as the staff members of the exchange. The separation took place around the time when electronic trading took over the trading floor. More details in Chapter 8.

food shop, or order takeaway lunch boxes from nearby fast food shops. On the contrary, the exchange staff had an upper floor canteen which was out of bounds for most of the members, where the exchange staff was served with meals designed by dieticians. The social distance between the exchange staff and prominent brokerage firms' managers might be narrower than that of the red jackets, nonetheless the gap in social status still existed.

Fig 5.3: G/F foyer of Exchange P



Occasionally I joined several red jackets for lunch in the basement canteen, and walked around the members' reading room and office area on 3/F east wing during lunch hours (11:30am-1:30pm). It was an area where brokers, clients and red jackets hanged around, had chats, smoked, read newspapers, and took their afternoon naps. Once I asked a few red jackets:

Siu: What is the job of the *huangmajias* (yellow jackets) on the trading floor?

Red jacket: They are there to *guan* (govern over) us.

...Red jacket (when asked if they could pick their own seats): No, the *huangmajias* won't allow that! Our locations are assigned by seat numbers.

In the Chicago exchanges, members of the exchange like dealers and traders had higher status than the exchange staff. When the two came across each other, say

in the washrooms, members might not bother to speak to the exchange staff. Yet it was the opposite way round in China's futures markets; the red jackets seemed to readily submit to the authority of the yellow jackets and other members of the exchange staff. I mentioned the Chicago piece to some red jackets, and they were pretty much bemused by the contrast. One red jacket said, "That's not too surprising. Officials in America are there to provide services (服務, *fuwu*); officials in China are here to govern (管, *guan*)."

The jobs of the red jackets were experiencing a rapid decline in status in the 2000s, due to the onset of electronic trading (see chapter 8). Yet the vocational shift (linked with technology and gender) could not account for all the differences in status. The public and quasi-public sectors in the Chinese markets seemed to possess extra forms of power lacked by their American counterparts.

5.2 The Quasi-Public Layer

Before we examine the origin of power of the Chinese futures exchanges, let us investigate the nature of ownership: who owned the three futures exchanges, were they public or private? Most field subjects knew that the exchanges operated upon cooperative membership (會員制, *huiyuanzhi*), where the members, namely the futures companies, were supposed to owe the exchange. Yet even experienced traders and brokers could not give a definite answer to the public/private question. A staff member of an exchange confirmed to me that futures exchanges used to be state-owned enterprises (SOEs, 國家企業, *guojia qiye*) in the past. In 2005 the state clarified the new status of the futures exchanges as vocational units, which was a surprise to some brokers and traders. One broker exclaimed, "Probably they [the exchanges] had the highest capacity of profit-making amongst all vocational units in the country!"

The term vocational units (事業單位, *shiye danwei*, pronounced as shi-yea-dan-wei) refer to a range of social organizations that were neither state-owned

enterprises (SOEs, 國家企業, *guojia qiye*), private enterprises (民營企業, *minying qiye*), nor non-government organizations (NGOs). They are institutions that provide public services, like hospitals, schools, utilities, agricultural supporting services, and news media.³¹ The term has been translated in some international conferences as “public service units”, yet domestic scholars suggested that the translation was inadequate to illustrate their full properties. Vocational units can carry out one or more of the following functions: execute governance functions (e.g. hospitals actively enforcing state policies of birth control); provide community services; and engage in profit-making activities (Fan 2004). These three functions are often intermingled, and the weighting between governance, community service and profit-making in an organisation can fluctuate. The mix depends on policy shifts and the organisation’s sources of income.³² Arguably, there is no clear boundary between the roles of governance, service and profit making; the organisations possess integrated properties in the quasi-public, quasi-private space in the market.

³¹ By the end of 2005, China had 1.25 million *shiye danweis* with a total of over 30.35 million employees. Over half of the employees worked in the education sector, and the education, healthcare and agricultural service sectors altogether comprised over three quarters of the employees (Pang and Tang 2007).

³² The assets of *shiye danweis* are legally considered as state assets. State bureaus often appoint state officials (國家幹部, *guojiaganbu*) onto leading personnel positions of *shiye danweis*.

Fig 5.4: A morning exercise session for the staff members of Exchange P

One feature of Exchange P as a quasi-public organisation was their morning exercise (晨練, *chenlian*) session on a huge public square before 8am on every trading day.

With the staff members dressed in smart white uniforms (Fig 5.4), they did some stretching and bending exercises for 10 minutes. Then one of the staff members would take his turn to talk about his recent work, or share some personal reflections. Around 20 staff members would choose to walk the 1km walkway leading to the seaside and back. Others would return into the building, get changed, and prepare for the day's work. When I talked to some members of the exchange staff, they said that they cherished the healthy practice, as it helped them to "keep fit and foster a

company culture”.³³ This ritual of morning exercise reminded me of the collective state enterprise culture from older communist times. Physical exercise on a daily basis on a communal setting was a typical example of bodily discipline (Foucault 1980). It could serve to reinforce the members of staff of their identity, loyalty and responsibilities to the organization. Meanwhile the “sharing” sessions could help to foster common values like organizational goals, staff morale and mutual support. The practice suggested that, the organizational culture of Exchange P emphasized the collective side of the staff members’ vocations.

Another incident during my fieldwork internship revealed interesting properties of quasi-public institutions. In autumn 2005, the China Futures Association organised a series of career talks called “Grand Lectures on Futures” (期貨大講堂, *qihuo dajiangtang*) as a roadshow event around major universities in the country. On each career talk there were a couple of key industry figures to give an introduction; a few brokerage companies were there to distribute company brochures and answer questions from students.



Fig 5.5 “Grand Lectures on Futures” in Beijing

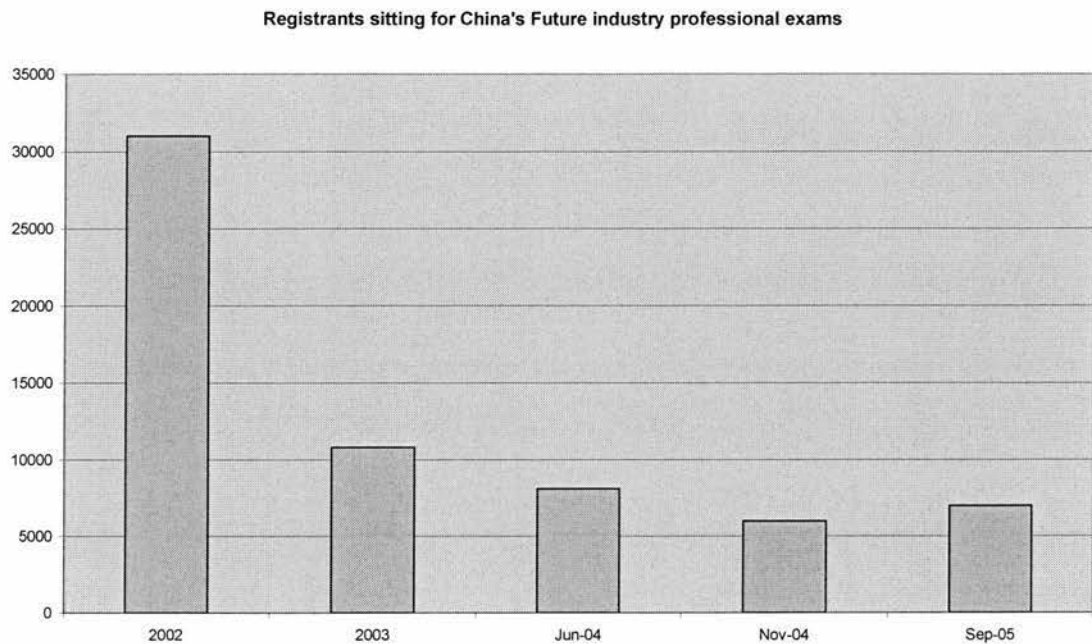
As a brokerage firm intern, one evening I attended one of those career talks. The lecture hall was jam-packed with hundreds of eager graduates-to-be (Fig 5.5). Without giving much thought to it, at first I understood my role as a junior intern as

³³ The morning exercise sessions of Exchange P seemed to be unique in the global markets. Exchange Q and Exchange R did not have such practice, and to the best of my knowledge, no similar arrangements had been recorded in other modern markets.

doing marketing, recruitment (competing for potential talents) and brand-building work for my brokerage firm, which was a private company. I also understood the association as promoting awareness and understanding about the industry amongst university students, which was a public service to the whole industry. I started handing out company pamphlets to all the students I could reach at the back of the hall. But the act turned out to be inappropriate – I was quickly stopped by a member of staff from the association. Later on a colleague explained to me that my act was embarrassing. It was less to do with disturbing the event's logistics, but rather because I got the real purpose of that event wrong:

XX [name of our brokerage company] is already a great brand. We don't really need to do any marketing among the students; the graduates will eagerly compete for our vacancies. We went there just to show our support and give face to the Association... Why do they organise the talks? By now most employees currently working in the industry have already passed the qualification exams. The Association is trying to get more fresh graduates to sit for this year's exams, reaping more exam fees.

Fig 5.6: Number of examinees sitting for China's futures industry professional qualifications exams



I apologised to both my colleague and the association's member of staff. The incident was very interesting for the ethnographer: in this case the quasi-public industry association got engaged in profit-making activities (earning fee income), while the private brokerage companies were there to provide supportive community service as a favour, and for free. It was an example that vocational units could flexibly merge the roles of governance, service and profit-making. When their income was decreasing (see Fig 5.6), it was possible for them to give a higher priority to profit-making activities. It was also possible for the roles of service and profit-making to swap and overflow across the public and private sectors. When the quasi-public sector (with a higher hierarchical power position) chose to focus on profit-making activities, sometimes the non-profitable role of service could overflow to the private sector through the exchange of favours, i.e. "giving face".

The nature of flexible quasi-public, quasi-private organization creates both benefits and problems. Compared with some Eastern European countries which took up Shock Therapy (see King 2007), I suspect such elastic institutions in China could

provide extra flexibility to cope with potential crises in post-Communist market reforms.³⁴ When faced with disruptions like inflation or shortage of supply, flexible organisations in China might be able to summon creative ways to generate their own income streams, or create alternative channels of supply and demand to become relatively self-sufficient, ensuring that the functions of governance and public service would not grind to a total halt and failure when difficulties accumulated.

However, in the process of market construction, this kind of quasi-public organisation also introduced extra uncertainties and risks in the market environment,³⁵ and created problems of fairness. Unclear definitions of responsibilities and rights gave quasi-public organizations a possibility to cherry-pick, channeling more attention to profit-making activities, possibly leaving service and governance half-way neglected, or leave them behind for organizations lower in the power hierarchy (e.g. private firms) to complement part of those non-profit functions. As we would see in Chapter 6, this could sometimes consume the resources of the private sector, weakening their potential to build a strong private sector. Sometimes it would also be confusing for organizations to decide who should do what.

³⁴ One common problem was the vacuum left between a retreating state and a weak private sector in terms of management and obligations. See King and Selenzer (2005). See also King (2007) for the adverse effects of Shock Therapy in former Soviet states.

³⁵ Beunza and Stark (2005) gave a brilliant account of “what counts” – how traders select and screen their input signals. Ellen Hertz (1998) discovered that “political analysis” was a much more important category of input signals for stock investors in China in the mid 1990s than elsewhere. My tentative thought is, the properties of quasi-public institutions in Chinese markets are correlated with higher political risks that influenced market outcomes. Therefore political analysis gets a higher weighting in the traders’ calculations.

5.3 On Commission Fees

Table 5.1 Commission fees in China's Futures markets (04-06, schematic sketch)

Exchange	Commodity	Commission Fees charged by Brokers (RMB/lot)		Commission Fees charged by Exchange	% Paid to Exchanges (very rough estimates)
		High	Low		
Shanghai Futures Exchange (SHFE)	Copper	¥70	*2.5 /10000	*2/10000	17-80%
	Aluminium	¥20	¥10	*2/10000 + (¥5)	25-50%
	Natural Rubber	¥20	¥10	*1.5/10000 + (¥5)	25-50%
	Fuel Oil	¥8	¥4	*2/10000 + (¥2)	25-50%
Dalian Commodity Exchange (DCE)	Corn	¥8	¥4	¥2-3	25-75%
	Soybean	¥12	¥6	¥4	33-67%
	Soymeal	¥12	¥5	¥3	25-60%
	Soy Oil	¥20	¥10	¥6 + (¥4)	20-40%
Zhengzhou Commodity Exchange (ZCE)	Wheat	¥10	¥4	¥2	20-50%
	Cotton	¥20	¥12	¥8 + (¥6)	30-50%
	White Sugar	¥40	¥7	¥4	10-57%
	PTA**	No data	No data	¥4	No data

Sources: Field subjects, newspaper reports, regional industry associations and the three exchanges.

Note: All commission fees were on "single-sided" transactions, e.g. opening OR closing of a position.

* The SHFE commissions were specified in fractions of current price.

+ Some exchange offered discounted rates for specified periods of time

** PTA was a new product listed in Dec 2006.

The issue of commission fees illustrated that the market was dramatically "compartmentalized" across the public-private boundary. Commission fees were charged on a double-tier basis: Firstly, for every transaction conducted through its trading seat, the member paid a fixed commission to the exchange, as specified in the

standardized futures contract. Secondly, for every transaction conducted, a client paid a commission to his/her brokerage firm, as specified by the terms of agreement between them.

Commission fees started to become a problem in 1998-2000, when policies towards futures trading were tightened.³⁶ The futures markets were drastically shunned off from their formerly major sources of capital influx and client base, leaving existing brokerage firms to compete for a very lean market that was drying up. The brokerage firms were in a very vulnerable position, as typically 90% of their income depended on one single source: the commission fees in only a dozen of commodity futures products. Due to license restrictions, limited asset classes available in China, and limitations of the domestic banking sector, these futures brokerage companies were not able to conduct trading on their own account, margin financing, issue options, or carry out settlement. They were not able to build portfolios or carry out arbitrage using equities and overseas futures products.³⁷ They could offer professional analysis and advice to their clients, yet in China these

³⁶ The policies were induced by a number of cornering events in the 1990s, where state bureaus (and their affiliated para-governmental organisations) speculated on commodity futures contracts. In some dramatic events, different cliques of state bureaus took up opposite positions on the same contract, mobilised massive funds (including public funds) and strong political base, and wrestled against the will of each other on “long” or “short”. E.g. Event 327 was a battle between organisations affiliated to the federal Finance Ministry and the Liaoning province, versus organisations affiliated to the Shanghai municipal government. To stop similar political scandals and prevent public funds from getting involved with high-risk speculations, top-level state officials like then Prime Minister Zhu Rongji (朱鎔基) decided to tighten the policies, and strictly prohibited any Chinese banks or political bureaus from taking part in futures trading. The policies were executed by the CSRC and the National Development and Reform Commission (發改委, *Fagaiwei*).

³⁷ 23 state owned enterprises were on an exemption list to allow hedging in overseas commodity futures products, as their core operations were closely involved with the spot commodities.

services were usually taken as customer-retention benefits, rather than a charged service *per se*.

With fierce competition and very little room to differentiate,³⁸ the commission fees went into a headlong dive in 2001. The <Temporary Rules on Futures Trading and Administration> (期貨交易管理暫行條例, *Qihuo Jiaoyi Guanli Zhanxing Tiaoli*) in 2001 stated that brokerage firms should charge for a commission fee three times the one charged by exchanges (Mao 2001). The measure slowed down the drop, and in 2002-2003 robust markets and volatility brought better profits to the whole industry. Yet in 2004-05 the price cut started again, and by 2006 all the brokerage firms were charging for fees far lower than the “1:3” level.

Table 5.1 shows the commission fees in 2005-06. Notice that it is a simplified sketch only; in practice a number of factors could influence the level of commission fees charged by the brokerage firms and by the exchanges. Commission fees charged by brokers depended on: Firstly, the client’s size of capital, trading volume, and nature of trading. Volume traders, day traders and speculators enjoyed lower fees than small-scale, infrequent hedgers. Secondly, fees could differ across geographical regions. They were higher in the comparatively well-off southern provinces; or in remote provinces like Xinjiang (新疆), where brokerage service was a scarce resource. Competition could be very fierce in Beijing. Thirdly, brokerage firms from some regions (e.g. Shandong 山東, Heilongjiang 黑龍江) had tried to negotiate cartel-like systems of floor rates. Some were able to uphold a floor price system for some time, but in many cases secret breaching of agreements made the agreements

³⁸ Global derivative brokerage firms could be categorized as FCM, IB, FT, FB, CPO and CTA. Yet in 2005 futures exchange memberships in China only had two rather undifferentiated categories, with very limited types of services to offer. In 2006-07 the industry was developing the categories of FCM and IB to prepare for the launch of index futures. It was China’s first financial future, and the product that linked up equity brokers and futures brokers.

useless. (4) The trading channels. Phone and floor trading were more expensive than electronic trading.

Commission fees charged by the exchanges could also differ from the standardized futures contracts. In special time frames, for example when the exchanges wanted to attract trading volume when new products were introduced, discounts (marked by + in Table 5.1) were given in the form of circulars and announcements to their members. Starting from 2004 the three exchanges also employed a measure of rebates (返回, *fanhui*) to some member firms. Those member firms who reached the top few ranking positions in trading volume could receive an annual bonus of RMB200,000 – 800,000 (£13,000-£53,000) from an exchange, significantly lowering their actual level of commission fees paid to the exchange. As a consequence, brokerage firms who were eager to secure these rebates were willing to give further commission discounts to their volume clients, or even have their commission fees waived. Some field subjects argued that the practice of annual bonuses from the exchanges was in effect aggravating the price war in brokerage commission fees.

Despite all the differentiating conditions and exceptions, nonetheless the general picture was that as most of the transactions came from volume clients, usually the brokerage firms were charging for commission fees more in the lower range. Hence usually more than half (50-85%) of their commission income went into the treasury of the exchanges. That ratio was remarkably high, as compared with the reported 1% in Japanese commodity futures exchanges (Lou 2007). Although the total number of staff members working in the three exchanges was less than 5% of those working in the futures brokerage firms,³⁹ in 2001 the three exchanges made a total profit more than three times that of all the 180+ futures brokerage firms put

³⁹ Rough estimate only. Field subjects told me that around 20,000 people worked in China's futures industry. The DCE had 140 members of staff. If the 3 exchanges had a total of 800 members of staff, that was only 4% of the private sector population.

together.⁴⁰ The figures provided here are sketchy and schematic only, yet the picture matches closely with ethnographic observations on the income and status contrast between the two sectors.

As shown above, there existed an uneven distribution of profit-making opportunities across the public-private boundary. The brokerage firms were exposed to fierce market competition and thin profit margins. On the contrary the three futures exchanges were relatively shielded from the rough waters, enjoying much higher profit margins. The two sectors were engaged in two separate compartments of the same market, and direct competition was impossible between them. Without legitimate means to conduct activities in settlement, margin financing, arbitrage in securities and overseas markets, or alternative channels like over-the counter (OTC), the market was segregated in terms of vertical services. There were no means for the brokerage firms compete with the exchanges.

5.4 The Question of Subjectivity

Most brokers considered the current system unfair, as the private sector had to shoulder most of the impact from the lack of capital inflow, yet their efforts of client recruitment and risk management were not adequately rewarded. However, the quasi-public sector saw the problem the other way round: the whole industry should be able to enjoy healthier profit margins if the brokerage firms followed the recommended 1:3 commission ratio. An exchange official was quote by the media: “There are too many futures company out there, and the competition is negatively

⁴⁰ According to a news report by Song (2002), the three futures exchanges made a total profit of ¥300 million (£20 million) in 2001. The 180+ futures brokerage firms made a total profit of ¥50 million (£3.33 million) in the second half of 2001, and made a total loss of ¥52 million (£3.47 million) in the first half of 2002. For comparison purpose, a rough projection was that the 180+ futures brokerage firms would have made a total profit of ¥100 million (£6.67 million) in 2001.

fierce. Every time when the exchanges lower the commission fees or give members rebates, the futures companies immediately lower the commission fees or give rebates to their clients. Commission fees are spiraling down, and the throat-cutting competition gets more and more severe” (Song 2002).

From the rhetorics of both sectors, it seemed that the public-private boundary was shielding the exchanges from the force of market competition, and at the same time, the planned administrative targets (the recommended 1:3 commission ratio) could not get across to be effectively implemented in the private sector. 25 years after China started its market transition, the public-private boundary here acutely illustrated the tension between the reasoning of a planned economy and a market economy. Nonetheless, regardless of ideological reasoning, the actual distribution of wealth and status was vividly uneven.

Another point to note was the organisational structure of the exchanges. Apparently the three Chinese commodity futures exchanges adopted a system of cooperative membership (會員制, *huiyuanzhi*), operated on a set of trading rules, and were subject to the regulation of the CSRC. If one stays within the text of the trading rules, the formal institution seemed to be comparable with other conventional futures exchanges in the world.⁴¹ However, leading personnel of the exchanges (general managers, party secretaries, deputy managers and board directors) were actually cadre positions of the State and the Communist Party, and these personnel were seen as an extension of the state regulatory system. Any personnel changes in these positions were announced by the CSRC, alongside the appointment of central and provincial CSRC positions.

⁴¹ By conventional futures exchanges I refer to future exchanges before the global wave of demutualization in the 1990s. The Stockholm Stock Exchange was the first exchange to be demutualized in 1993. Then two large exchanges: CME and NYMEX started considering about demutualization (Hart and Moore 1996). In East Asia, the Hong Kong Stock Exchange and Futures Exchange underwent merger and demutualization in 1999 (He, Suen and Guan 2005).

There was an agency problem between the futures exchanges and their members. In the rules the annual general meeting was the highest decision body in the institution, yet in practice members could rarely exert an influence on personnel, budgeting or general governance. Some institutional economists in China held the view that the Chinese futures exchanges were not implementing cooperative membership in its genuine sense. Instead they had formed a monopolistic bracket in terms of the market's vertical integration. In name these exchanges adopted cooperative memberships, but the actual structure of governance resembles that of an outside ownership by the state. Competition between exchanges did not occur only by market mechanisms, but the listing of products were approved by the CSRC according to the balance of regional interests and political interests:

... The result of the lack of market competition is that, the exchanges would make use of their monopolistic market positions to obtain monopolistic, windfall profits. This is also why Chinese futures exchanges, up till the time of writing, have not actualized cooperative membership in a genuine sense.

He, Suen and Guan (2005) P.86; translation by Siu

Domestic industry critics and academics quite often used the term “subjectivity” (主體性, *zhutixing*)⁴² to describe the futures markets (for example, Ju 2006, Ouyang 2006:80). The public sector was said to “have a strong subjectivity” in the markets, meaning that as a more established social unit, it was able to take initiatives, make decisions, draw resources, and play a more active role on the markets. The private sector was described as having “a weak subjectivity”, being weaker in terms of financial strength, social and political resources, and having a fragmented market

⁴² The Chinese term 主體性 (*zhutixing*) carried a translated Marxist sense, and was possibly ascribed from the term “revolutionary subjectivity”.

structure that was difficult to mobilize. Private entrepreneurs complained that “futures companies have now fallen to the status of laboring for the exchanges”.⁴³

In 2006 the China Futures Association elected a new executive committee. A number of veteran representatives such as Tian Yuan (田源) and Chang Qing (常清) stepped down, and many of the major positions were taken up by leading executives of the four exchanges, especially those in charge of the fourth futures exchange and the first financial futures exchange, China Financial Futures Exchange (中國金融期貨交易所, CFFEX). Industry news described the situation as the association getting a “thickening scent of officials” (官味漸濃) (Zhu K.-d. 2006). If industry representatives shifted from the private sector to the quasi-public sector, it seemingly indicated that the quasi-public sector, rather than the private sector, was the core subject of China’s futures industry.

The viewpoints of monopolistic profits, asymmetric subjectivity, and deviation from conventional cooperative membership were in line with the fieldwork data in sections 5.1, 5.2 and 5.3. How did such properties come into being? What do we understand about the Chinese commodity futures markets? Were “Chinese characteristics” the signs of a transient hybrid market that would eventually finish its migration path to converge with other global capitalist markets (Nee 1983, 1999; Friedman 2006), or is market construction a path-dependant and contingent process that could eventually lead to divergent outcomes (Callon 2007 chapter 11, Wank 2002, Gray 1998)?

5.5 Political Agencement at Local Levels

In China historically the prices of agricultural grains had been embedded within political and communal contexts. Notice that usually it was the local government that

⁴³ Hong (2007) quoting Zhang YuanPei, managing director of a Shanghai futures brokerage firm.

took the lead to align a consortium of regional state-owned structures (like the food and oils distribution system, state reserve bureau, economic bureaus and telecom bureaus) to establish a local commodity exchange.⁴⁴ The early 1990s was the time when local governments had “increased responsibilities, less centrally allocated resources to achieve them, and greater autonomy to devise solutions” (Wank 2002:101). From the local government’s points of view, a commodity futures exchange was an attractive project because firstly, it brought business opportunities to the local state bureau, and helped to stimulate the local economy. Benefits included the accumulation of capital (as membership fees, commission fees and margins), the initial construction works and services, plus business opportunities to local enterprises; secondly, it could become a favourable item on the local official’s political resume. Success would produce a political showcase of “socialist economic reform”; thirdly, federal regulation and entry barrier were nearly non-existent in 92-93, enabling the local governments to take things in their own hands.

Local governments were in a much better position than the private sector to take up the role as principal initiator of the organising committee. It was them who were able to mobilize highly heterogeneous local (地方, *difang*) resources to form the *agencement* needed for a commodity futures exchange. Such resources included land use, construction works, government permits, public utilities, telecommunication infrastructure, banking, suppliers and consumers of the agricultural or industrial commodity (in the form of large state-owned enterprises), ports and logistics, state reserve, and delivery warehouses. Many of the above elements were partially controlled or redistributed by state cadres (Guthrie 2002, Wank 2002). The local governments could be highly flexible and creative in utilizing their resources. For example, when Exchange P first started its simulated trading in

⁴⁴ The paradigm of a group of merchants forming an early exchange like the Chicago Board of Trade did not appear in mainland China in the 1990s, although the paradigm once appeared in Hong Kong (1891 for stocks, 1910 for precious metals; Fung 2002) and Shanghai (1920, commodities and stocks).

and long-term forward contract trading in autumn 1993, Exchange P was a humble organisation with only 6 members of staff, a budget of RMB 60,000 (4,000 pounds), and 700 square metres of office space (Exchange P website 2003). The original site was a building rented from the local branch of the Ministry of Information Industry (see Fig 5.7), with the extra benefit of good infrastructural support on a major local telecom exchange hub. This was a wonderful resource as in the early 1990s, some small private companies in mainland China could still wait for months to get a telephone line installed. On the contrary, for the private sector to access comparable resources, sometimes non-state agents had to undergo sophisticated open procedures or private *guanxi* connections, both involving high transaction costs. Some items might be unavailable to the private sector altogether.



Fig 5.7 The first rented location of Exchange P in the early 90s

When we study the construction of exchanges, a theory of the firm applicable here is to define a firm by its non-human assets (Hart and Moore 1996). Tangible assets relevant to exchanges were the physical location and equipments; important intangible assets were things like reputation for honesty, enforceable trading rules, and above all, market depth (Hart and Moore 1996:55). My tentative hypothesis is, since modern mainland Chinese society had a rather weak basis of credit, mutual trust and legalism, political authority was a possible substitute when it came to issues

of trust. That was also why exchanges fully initiated and supported by a local government could gain better trust from investors and traders, and kick-start its market depth.

Fig 5.8: The photos of state leaders displayed outside the trading floor of Exchange P



One fieldwork observation could help to support this argument. In the time of my fieldwork, Exchange P launched a large-scale education and marketing project. It was a series of two-day workshops organized for farmers, retailers, wholesalers and state enterprise employees, most of who came from the northeast provinces Liaoning (遼寧), Jilin (吉林) and Heilongjiang (黑龍江). The project ran on for hundreds of classes for a few months, targeting at tens of thousands of people. With the help of some field subjects, I managed to slip into a few farmer classes and attended their workshop programme. In each workshop programme there was a session when participants had a walk around a glass hallway surrounding the 2/F trading floor. Before the entrance to the trading floors, there was a stately hall to display over a

dozen of photographs when high-ranking state officials (國家領導人, *guojia lingdaoren*) visited the exchange over the years (Fig 5.8).⁴⁵ In domestic political jargon, such visits were typically described as “affectionate care” (親切關懷, *qinqie guanhuai*) from the communist officials, and each picture was magnified to a size like 6 feet x 4 feet and displayed in luxury frames. The first time I saw this dazzling marble hall, I used to dismiss it as mere ornamental flamboyance, possibly related to the personal taste of some bosses of the exchange. But later on when I listened to how other visitors talked about it, I realized that I was very wrong. For example, in the final feedback session after a two-day workshop in July 2005 (Fig 5.9), one farmer participant said:



Fig 5.9: Feedback session of a futures training class for farmers

Being here, seeing the photographs of so many state officials visiting [Exchange P], I was excited to learn that... we the northeast region had built such an advanced and important facility for the whole country.

During the trading floor visits, many workshop participants were eager to ask people to take pictures of themselves in front of the officials' giant pictures. These halls and

⁴⁵ Political figures displayed in large frames in exchange P included Hu Jintao (胡錦濤), Jiang Zemin (江澤民), Zhu Rongji (朱鎔基), Li Ruihuan (李瑞環), Li Peng (李鵬), Li Lanqing (李嵐清), and provincial leading officials. A similar hall also existed at exchange Q.

pictures were useful artefacts that had actual impacts on how visitors perceived the exchange, and could effectively contribute to the exchange's status, reputation and trust-worthiness. Similar pictures also appeared in conspicuous positions in exchange publications and websites. Such display of state political support was an important element of *agencement* to strengthen public trust towards the exchange. The heterogeneous *agencement* involved human and non-human components, like the involvement of municipal cadres, and the telecom infrastructure of Huaxin Building. It also involved tangible assets like the physical building, and intangible assets like trust. In the case of the pictures of state leaders, they were an intangible component of political support and trust, embodied in the material form of frames and pictures.

Care should be taken to distinguish between the *actual use* of political power in market *agencement* (e.g. mobilizing local land and telecom resources), and the *perception* of political power in market *agencement* (e.g. to display pictures of political leaders in a hall). While the former directly contributed to tangible assets, the latter had more to do with intangible assets like public trust and reputation. Nonetheless both were essential components for market construction.

The discussion in 5.5 shows that firstly, agents from the public sector were providing scarce and essential resources for market construction, namely political power and other people's perception of it. Secondly, the state agents' important contributions in market construction could at least partially explain why they enjoyed a superior status in a later stage in China's futures market structure. The monopoly of political power (relative to non state agents) was later on converted into monopolised trading platforms and high profit margins in commission fees. Instead of migrating from a planned economy to an open free market where privileges of bureaucratic cadres simply withered away (Nee 1993), here the theory of power conversion (Rona-Tas 1994) was more valid. Thirdly, market construction, in this case study, was far from the idealized disentanglement between state and market as described by neoliberals. Politics *was* an important building block of the *agencement* here.

5.6 Penetration and control – what was said and what was done?

State penetration in modern Chinese society could be so pervasive that scholars sometimes argued whether any formal social organizations could exist without being penetrated by the State (Yang 1994, Wank 1998). Party representatives (usually in the form of party secretaries) were appointed by the Communist Party in all public and vocational units (單位, *danwei*), and sometimes in “mass organizations”⁴⁶ as well (Burns 1994). These representatives were directly reporting to the State and responsible for implementing state policies. These positions at national and provincial levels had to be informed and approved by the central party bureaucracy. For example, in <Job title list of cadres managed by the PRC central government> (中共中央管理的幹部職務名稱表, *Zhonggong zhongyang guanlide ganbu zhiwu mingchengbiao*) in 1990, the leading positions of state-owned banks belonged to the same appointment category as those of the State Council, the police, and diplomats. These state cadre positions were resident in the regional CSRC bureaus, all the exchanges, and all the state-owned brokerage companies.

These institutions had dual properties: they were both an integral part of the market structure, *and* part of the communist political structure. Occasionally such duality led to dramatic scenarios in the eyes of an ethnographer. For example, a nationwide political movement called “On Preserving the Advancedness of the Communist”⁴⁷ (保持共產黨員先進性, *baochi gongcandangyuan xianjinxing*, abbreviation 保先 *baoxian*) was launched by the Party between January 2005 and June 2006. The movement was aimed at party members to tighten up on corruption,

⁴⁶ Institutions and organizations in culture, media, technology, youth, gender, disability, union, industry associations, and religious groups.

⁴⁷ English translation according to the *baoxian* movement’s official website.

and to promote “Three Represents” (三個代表, *sange daibiao*)⁴⁸ proposed by former PRC President Jiang Zemin (江澤民, *Jiang Zemin*) in 2002. Political workshops and weekend political retreat camps were organized throughout the country across industries in government bureaus, vocational units and state-owned enterprises. *Baoxian* booklets were disseminated for free to these organizations, and party members were required to write reports about their personal political reflections.

When I was serving my internship in futures Exchange P, one Friday I heard a colleague in my department ringing up the departments of the exchange one by one, reminding them about a *baoxian* workshop after the market closed at 3pm. Similar workshops were held in state-owned futures brokerage firms, where communist-traders and communist-brokers attended the political classes. My colleague, as a promising and aspiring cadre, told me that usually being a party member was helpful for one’s career development. But another younger colleague (whom I knew much better) privately told me that those meetings were “such a waste of time” and boring. Sometimes they just had to attend as a compulsory requirement. I understood that on one of those Friday *baoxian* meetings, some pragmatic-minded field subjects took market reports and finance textbooks into the venue, and read them quietly on the back benches. On another occasion, a field subject took me home and showed me a *baoxian* booklet in mockery: “Look at all this party cliché (黨八股, *dangbagu*). Horrible.”

Apart from political movements, the market people in 2005 (in state enterprises and vocational units) sometimes still had their private lives under the ambivalent “care” (關懷, *guanhuai*) of their party secretaries. Once a field subject

⁴⁸ English translation according to the *baoxian* movement’s official website. Based on “The Three Represents”, the Party must always represent: firstly, the requirements to develop China’s advanced productive forces; secondly, the orientation to develop China’s advanced culture; and thirdly, the primary interests of the people. Although the principles were sometimes obscure, a concrete effect was, capitalists were formally and openly allowed to become members of the Communist Party.

told me that she ran into some marriage problems. The party secretary in her brokerage company called her for a private talk, and tried to act as a mediator between the couple. She had to answer extremely carefully as such incidents could possibly be helpful, patronizing, a form of political surveillance, and influenced her career at the same time. These episodes were commonly seen in many state-owned enterprises in China and not limited to the futures and securities industries. Yet these incidents reminded the reader that market institutions (like exchanges and brokerage firms) in China were far from being disentangled from state penetration and political responsibilities. Most of them *were* still part of the state political machinery when the need arose.

Care should be taken to distinguish between actual state control and political rhetoric (Burns 1994). As Shue (1988) suggested, the reader should not overestimate the Communist Party's penetration power and control over civilian life. The private sneer and mockery, the silent backbench reading, and the careful answers all showed that in 2005, the Chinese Communist Party's explicit penetration of civil life was less effective than a few decades ago – the market people were extremely pragmatic, and the communist ideals seemed to have undergone erosion (Walder 1995).

Chapter 6

Gangs: Network-based Cognition

This chapter is focused on social connectivity within the investor community of China's commodity futures. Fieldwork data illustrates how futures investors form flexible social aggregates in various shapes and forms. These market structures are built upon existing social relationships, remain in continuous flux, and are deeply embedded within political, economic, geographical, professional and kinship affiliations (Granovetter 1992). Connectivity and embeddedness matter, because they determine one's position and social capital (Bourdieu 1977) in the markets; they also contribute to the overall pattern of market price movements (Baker 1984).

Conversely, the markets confer new meanings to existing social relationships, solidifying some ties and antagonizing others. This chapter will start from a background introduction to corner events in the brief but rocky history of China's commodity futures markets. The characteristics of compact "battle teams", larger capital factions and charismatic leaders will be discussed. Field records include a special case of exchange Q – how clientelist networks (Wank 1999) are formed across the public-private boundary to form growth coalitions (Davis 1990). The chapter closes with a discussion on rule-based and network-based rationality (Qu 1961, Fei 1992, Hutchins 1996, Hardie and MacKenzie 2006), and some of the challenges faced by China's society when it embraces the market economy.

The stronger forms of social connectivity can sometimes be seen as associated with market collusion. Understandably, only on rare occasions would field subjects be willing to talk about their own experience in this area. However, rich sources of indirect evidence such as narrations about other people, events recalled from a long time ago, media reports, and "documentary novels" written by industry practitioners are available from the field. Such field evidence shows that capital factions are an active form of social structure in the markets running upon network-based rationality, especially in the 1990s. Interestingly, they also reveal

characteristics that resemble a much older social structure called *bang* (gangs 幫, pronounced as “bong”), as described by Fei (1948:176) and Zhang L. (2001:105-107). To protect the informants, the personal particulars of some field subjects have been changed in this chapter.

6.1 Corner Events

In 2005, China’s futures industry was still under tight regulatory control in response to a series of alleged market manipulation and collusion in the 1990s. In the markets sometimes people gossiped about collusion and market manipulation by big players (*dahu* 大戶). Those futures people with working experience in the 1990s could readily recall dramatic corner (*bicang* 逼倉) events on various exchanges, and they considered corner events as a core feature of China’s futures markets at that time.

“Cornering the market”, in its classical sense, means buying up a significant amount of a commodity futures contract and/or controlling the spot supply to inflate the price. The cornering party will then settle their long position futures contract, and/or sell off the spot stock at high price for profits. Classical examples in the US include the Great Salad Oil Swindle of soy oil by Tino De Angelis in 1962, the attempted cornering of the silver market by Nelson Bunker Hunt and Herbert Hunt in 1980, and the British energy firm BP being accused of attempting to corner the US propane market in 2004. It is also possible to initiate market corner events from the short side, where the incident is called a bear raid. A party can build up vast short futures positions, create a sudden surge of spot supply to push prices down, and then reap profits from their short positions (Xu 2004 pp27-30).

Table 6.1. Incidents of Corner Events in China's futures markets⁴⁹

Time	Product / Futures Contracts	Exchange	Remarks
2004	Natural rubber 0407	Shanghai Futures Exchange (SHFE)	Corner
Oct 98 – Jan 99	Mung bean 9903, 9905, 9907	Zhengzhou Commodity Exchange	Corner
Summer 1997	Natural rubber R708	China Commodity Futures Exchange, Inc of Hainan (CCFE)	Corner
1996-1997	Coffee F605, F607, F609, F703	China Commodity Futures Exchange, Inc of Hainan (CCFE)	Corner
Jun 1996	Plywood 9607	Shanghai Futures Exchange (SHFE)	Corner Settlement on negotiated price
Jan-Mar 1996	Red bean	Suzhou Commodity Exchange	Corner
Oct-Nov 1995	Soymeal 9601, 9607, 9708	Guangdong United Futures Exchange (GUFE)	Corner
Oct 1995	Sticky rice 9511	Guangdong United Futures Exchange (GUFE)	Corner
May-Jun 1995	Red bean 507	Tianjin Commodity Exchange	Corner
1995	3-year T-bond 314, 327	Shanghai Securities Exchange (SHSE)	Corner [short] Insider trading [long]
Mar 1995	Palm Oil M506	China Commodity Futures Exchange, Inc of Hainan (CCFE)	Corner (short)
1995	Corn C511	Dalian Commodity Exchange (DCE)	Futures inflation derailed from spot
1994-1995	Steel wire	Suzhou Commodity Exchange	Corner
Jul-Oct 1994	Japonica rice	Shanghai Food and Oil Exchange	Corner

Sources: Dang, Huang, Wang and Xu (2001) <China Futures Risk Review Series>, 13 Oct 2001, hexun.com; plus 3 interviews with brokers and analysts.

⁴⁹ This list is not exhaustive.

There are a number of historical review articles circulating on the Internet on major corner events during the 1990s, like Dang, Huang, Wang and Xu (2001). The major events, alongside with a couple of corner events mentioned by my interviewees, are listed in Table 6.1. Cornering was never a phenomenon unique to Chinese markets, but its frequency of occurrence in the 1990s was alarmingly high – notice that Table 6.1 was not an exhaustive list. The local terminology often referred to corners as “risk events” (*fengxian shijian* 風險事件). Such a polite synonym masked the intentional human actions less visible. Regulators in China often openly condemn cornering, or *bicang*, as violating the public good of the markets. Yet in a pragmatic light, the industry saw corners as a form of recurring systemic risk that needed to be managed and addressed to. Domestic economic researchers even tried to build mathematical models on these corner events based on game theory and information asymmetry (see Zhang, Tien and He 2001).

Why did China’s futures markets have a high rate of corner events in the 1990s? It was true that by then the domestic regulatory body was too inexperienced to prevent acts of cornering effectively. Yet the formation of corners showed interesting inherent properties of the markets.

A methodology precaution should be stated here: there was a time gap of 7–11 years between my actual fieldwork (2005) and the period when *dahu* collusion was at its peak (1994–98). I had never witnessed a corner event on-site, and it was extremely difficult to find someone willing to admit and describe their own participation in collusion and corners. The field data in this section is combined from the retrospective account of field subjects, as well as from archival data. Personal and company particulars have been altered to protect certain field subjects.

6.2 Organised Battle Teams

During my fieldwork, veteran trader W is the only person who is willing to talk about his participation in a trading team that took part in cornering. Once he puts me on the rear end of his bicycle, and gives me a ride pedalling through his city. He then

walks me through a three-star hotel. In a nostalgic mood, he recalls his life there as part of a trading team in the late 1990s. He verifies the existence of futures trading teams in concealed hotel rooms:

"Look, this is room 319 where I have lived for one full year... Three adjacent rooms were rented to us on quarterly basis, and all the hotel staff could recognise us. We moved our computers in, and there was no phone in the rooms. This is the lounge, where we used to sip drinks in the evenings after an intense trading day... We had a dozen of people working here. In the name of XXX (a futures brokerage company), we were trading on behalf of the provincial and municipal food and oils sector. Most of the time we went [for the] short [position]. "

His experience is a strong form of deliberate market intervention, where corner plans are executed by a single organised team. The group has quasi-military properties. There is a hierarchical structure and lines of command; the team leaders' personal qualities of calmness and charisma are cherished. The traders have some form of division of labour, such as having different traders responsible for the contracts with different expiry dates, or having different traders responsible for longs and shorts. In order to get around the regulatory constraints of position limits, they have to *fencang* (分倉) – divide and disguise their funds and trading orders under different accounts, brokerage firms and trading seats. Yet as a "battle team", they are sitting within close reach of each other, so as to maintain closely integrated cooperation.

Before initiating a corner, usually the team has to prepare all the funds and reserves they need, and draw up a "battle plan". Their strategies employed include *duobikong* (多逼空), *kongbiduo* (空逼多) and *ruanbicang* (軟逼倉), depending on whether they are going for long or short, whether they were mobilising spot commodities, the pace they want to go, and the financial strength of their opponent camp – if that piece of knowledge can be estimated. Since the price of a particular futures contract can only go up or down, the corner team sees a price as a war-zone frontier, where the long and short camps are engaged in a fierce struggle of strategy, will, financial strength and teamwork. Prices can be "pulled up" (拉上來) or "shot down" (打下去).

In a half-documentary, half-fiction novel on China's futures markets in the 1990s, Liu and Yan wrote about how a battle team planned to manipulate mung bean futures in Zhengzhou:

The plan quickly materialised. They will use part of the funds to support the prices of 1994 Jan, Mar and May contracts, prevent them from falling any further. Use most of the funds to operate on the Nov contract. Operate in two phases: phase one, quiet position build-up at the bottom price ranges. Phase two, launch a sudden attack, ambush upwards on the Nov contract, until those who held the Nov shorts collapsed.

... 10th Sep, the plan was fully launched. 'B, 11D, 20, 23200, Open!'⁵⁰ [The team leader] issued standardised instructions to red jackets on the trading floor. 'Done? Good, continue. B, 11D, 20, 23160, Open!' The price was still sliding, good, nobody notices. 'B, 11D, 20, 23000, open!'

Liu and Yan (1999) p.77-78, my translation

The compact size and nimble flexibility of these trading teams could be compared with hedge funds in global markets. Given the limited number and categories of financial tools available in the domestic markets, the portfolios of these *dahu* teams were unimpressively simplistic. Nonetheless, their battle plans could be shrewd and complicated, and they had the additional advantage of *guanxi* networks to influence political decisions, as well as to control the supply and distribution of the spot commodity. For example, in "event 327" in 1995, the long side was accused of insider trading, in which they deciphered the Finance Ministry's intent to raise the coupon payout rate of a 3-year state treasury bond. As another example, in 1994 one trading team exercised a bear raid on steel wire futures in the Suzhou Commodity Exchange (蘇州商品交易所). Through social and political ties, the team was able to mobilize state-owned factories in the region to operate in full-swing productivity,

⁵⁰ The instruction means "buy 20 lots of November mung bean futures at the price of 23200, open position".

flooding the designated delivery warehouses with an unexpected level of spot supply in a surprise ambush.⁵¹ In some futures contracts where the total market capital was low enough, these *dahu* trading teams were able to shape the pattern of price movements to reap windfall profits.

6.3 Capital Factions and Proximity Cliques

Organized battle teams were structures on a micro level. On a meso level, market movements were often comprehended in terms of “capital factions” (*zijin paixi*, 資金派系). In times of volatile market movements, it was common for the industry discourse to identify who the “main force” (*zhuli*, 主力) behind the longs (*duotou*, 多頭) and the shorts (*kongtou*, 空頭) were. These capital factions could be identified by geographical locations, like Sichuan faction (川系), Zhejiang *bang* (浙江幫), Shanghai faction (滬系), or Henan province (河南省); by state-owed industry enterprises, like food and oils, animal feed, or nonferrous metals; or, by the brand names of powerful organizations, like CEDTIC⁵² (owned by the Ministry of Finance) and SISCO⁵³ (the showcase of Shanghai’s municipal financial strength in the mid 1990s). During the 1990s, capital factions used to carry strong tones of regionalism or personal heroism, and they clashed violently in the futures markets, especially

⁵¹ See Xu (2004: 28-30, 46-47) for a dramatic description. See SHFE (2005a) and SHFE (2005b) for analytical reports on why steel futures were vulnerable to corner events in 1992-94.

⁵² China Economic Development Trust and Investment Corp 中國經濟開發信託投資公司 (中經開), abolished in 2002.

⁵³ 萬國證券, Shanghai International Securities Co. Ltd.. After Event 327, it underwent a merger with Shenyin Securities to become Shenyin and Wanguo Securities Co. 申銀萬國證券 in 1996.

during corner events.⁵⁴ By looking at the list of “most active” trading seats, announced by the exchanges for each futures product at the end of each trading day, experienced traders and brokers usually knew which capital factions were active.

These factions showed some characteristics of proximity cliques, as described under the framework of social network analysis (for example, see Scott [2000:114-120] and Burt [1995, 2005]). Agents from the same geographical location or within the same industry in the same faction tended to stay in frequent contact with each other. They had mutual common contacts, shared overlapping information sources, and created a mini social environment that tended to produce similar viewpoints. Such informal structures could be recognized by the high density of social connections within a local subnet. Sometimes cliques also showed features of centrality, as the capital factions were aligned around charismatic leaders (see section 6.6).

Jingmou Li (李經謀), the founding director of Zhengzhou Commodity Exchange, was quoted by Liu and Yan (1999). His words could be understood in the light of the aggregation of proximity cliques and consensus:

“Take the example of the collusion between *dahus*. We hear rumours all the time, but it is difficult to find evidence...These people are all old friends, old alumni and old colleagues, and they are just getting together for a meal. You cannot set up a trading rule that prohibits futures people from seeing each other. You cannot forbid them from talking about market trends, or sharing their trading experience. But very often consensus is achieved in these ‘talks’ and ‘sharing’. Don’t underestimate the issue of collusion. It is a characteristic feature of our futures markets.”

Liu and Yan (1999) p.141, my translation

⁵⁴ During the 1920s-1930s under the regime of the Republic of China, similar capital factions were also extremely active. In the late 1920s, there were over 100 futures exchanges in Shanghai and southern China (Chen and Zuo 1994, Xiao 1986, Zhu 1998, Ma and Meng 2005, Liu 2007).

A broker in Beijing describes to me in an interview:

It is difficult for any *dahu* to control the price of a futures product on long-term basis, but it is possible to do it on small products for short periods of time. In the 1990s, we had witnessed fierce manipulation on small products like coffee and cocoa. Prices could rise to the market-halt limit for 7-8 consecutive days; fall to the market-halt limit for another consecutive 7-8 days; then rise to the market-halt limit for another 7-8 trading days again. No matter how you trade, once you step into these markets you're doomed.

6.4 Passive Discovery, or Active Battle?

I have attended 4-5 beginners' futures training workshops in China; all of them started with textbook definitions of hedgers and speculators. Hedgers were described as spot traders who tried to avoid the risks of price fluctuations; speculators were opportunistic investors who tried to gain from price fluctuations. The purpose of futures markets, according to my workshop instructors, was to serve as a tool for price discovery and risk management. Risks were supposed to be transferred from hedgers to speculators.

The markets in reality were far from such an innocent picture. Field subjects kept telling me that real hedgers hardly ever existed in China. Whether traders came from spot-trading enterprises or cash-based investment companies, whether they went for long or short positions, nearly all futures traders in China were opportunistic risks seekers. When traders were asked to describe their own actions, nobody ever described themselves as being hedgers or speculators, nor did they perceive themselves as conducting "transfer of risks". Instead, they described themselves as

“longs” or “shorts”, who were exercising “game theory” (博奕 *boyi*)⁵⁵ against other capital factions on the markets. It was other factions’ actions that had immediate, direct impact on prices. On the other hand, fundamentals, “intrinsic price” or “rational price” were something that they would consider on the long-run, but such considerations were quite often treated as secondary references, or nearly ignored by day traders. (See also Siu [2002] for the influence of fundamentals and market perceptions on prices.)

From time to time, the three exchanges promoted “price discovery” (發現價格, *faxian jiage*) as a positive, justifying function of futures markets. They also used the argument to lobby regulators for launching new futures products (as I had seen on a lobby document prepared by exchange Q in 2005). However, market traders and analysts sometimes made ironic mockeries about the phrase’s implied passivity and objectivity. Mockery was made by those who were about to initiate a battle plan, “I am going to ‘discover’ the price at XXX.” Or, after violent corner events, traders made sarcastic comments, “Look, the market has ‘discovered’ the price at XXX!” Although traders did not use the terminology of epistemology, they were the people keeping a close eye on prices on an hourly basis. These traders were aware that price movements were a collective result of the purposeful actions of the market people themselves, not some latent information waiting to be “discovered” outside the human world.

There was one significant difference between futures markets and equity markets. Since futures trading did not create net economic value in the futures products themselves, it was a zero-sum game. The profits of the winners, plus the commission fees received by the exchanges, all directly came from the loss of the

⁵⁵ The word 博奕 (*boyi*) is the academic direct translation for “game theory”. When used in a game of chess, it also means “calculating the logics of one’s opponent”. In Chinese, the term got diffused into non-academic language for common daily use.

losers. (Whereas in the equity markets, it was possible for everyone to gain profits at the same time if there was a net growth in fundamental values of the underlying companies.) Traders understood that to obtain X yuan of profits from their own position, somebody on the opposite position had to lose X yuan, plus the commission fees for both sides. It was a fierce and competitive game. In practice, usually the traders used a language with battlefield metaphors, such as “ambush” (突襲), “entice” (誘敵), “trapped” (套牢), “besiege” (圍) and “crash” (砸). Especially when they talked about the 1990s when the leaders of the long and short factions could be clearly recognized, traders perceived themselves as being engaged in a battle with a recognizable collective opponent. When the markets developed into a corner event, both sides were pushing the same price in opposite directions. Just like a tug of war, if one side failed to sustain the capital, *guanxi* and will power to match one’s opponent, prices could swing to extreme levels in a single direction, allowing the remaining side to reap the profits.

On the futures training workshops that I had attended, some instructors talked about a “war-like mentality” and “psychological quality” (心理素質) as essential to the success of futures trading. Interestingly, I had also come across a large number of veteran soldiers from the People’s Liberation Army (PLA), who had newly switched to full-time or amateur futures trading. In a few cases, I had the rough impression that these people often did better than the average novices in simulation trading sessions. Although my sample set was too small to draw any statistically significant conclusions, it was possible that those personnel redundant from the military were used to high-risk, war-like environments, which enabled them to fit in easily into commodity futures trading. It was also possible that these veteran soldiers were on the verge of falling into marginal social classes; as they had less at risk, they might be more inclined to undertake high-risk investment activities.

6.5 Spot Factions and Spot-less Factions

From the 1990s onwards and persisting into 2005 when I was doing the fieldwork, spot-trading factions did differ from those with non-spot backgrounds. According to some traders and brokers, spot-trading factions were usually state enterprises in charge of national or provincial grain and metal supply. They had large quantities of the spot commodity at hand, and they went for short positions more often than long ones. When prices fell, they could close out their positions and reap cash; when prices rose, they could still opt for physical delivery, and the loss was less conspicuous. Sometimes these state enterprises were given the nickname “short forces” (空軍, *kongjun*, which rhymed with “air forces”). They had the following properties: firstly, due to their large scale of inventory and turnover, their futures trading volumes could reach bulk levels, making them the inherent *dahus* of grain and metal futures. Secondly, due to their geographical proximity to production areas (e.g. soybean in the northeast provinces, wheat in Henan province, or white sugar in Guangxi province) and regular presence in spot trading business, they had good connections with regional state officials.⁵⁶ Thirdly, they were loyal and regular traders on the relevant futures exchange(s). Fourthly, as large state enterprises, getting loans from state-owned banks was comparatively easier. These traders were less interest-rate sensitive. Fifth, as “hedgers” in principle, they occupied a moral high ground versus the “speculators”. Differential treatment between “hedgers” and “speculators” could be detected in the draft set of trading rules that I had translated for exchange Q. In case if the exchange took actions to reduce overall market risks in

⁵⁶ Online blog articles like Burned Account (2007) and a few brokers believed that the high-ranking policy bureau National Development and Reform Commission (國家發展及改革委員會, 發改委, *Fagaiwei*) was keen to keep the inflation of major commodities prices under control. They believed that *Fagaiwei* was likely to produce policies in favour of the short factions, and there was a policy skew on prices. Without direct contact with any representatives from *Fagaiwei*, I am in no position to confirm or refute such allegations.

a corner event, those classified as “hedgers” would face a gentler margin increase. In the case of compulsory position close-outs, those classified as speculators were usually targeted first, while those classified as hedgers usually stood at the back of the close-out sequence.

On the other end of the markets, the spot-less factions were much more fragmented. Overseas financial institutions and domestic banks were banned from China’s futures markets. Private-sector investment organizations were yet to be developed, and domestic mutual funds, pension funds or insurance companies were underdeveloped. Some leading futures companies in first-tier cities such as Shanghai or Beijing were starting to launch primitive forms of mutual funds as innovative, experimental products, yet futures brokers described their presence in the commodity futures markets as “negligible”. The typical long factions were people who managed to accumulate some wealth from the stock markets, real estates, and a mixture of civilian and para-governmental sources. These were people who had cash in hand but not the spot commodities. A frequently way of thinking from this camp was, “there is always more money than spot” (錢永遠比貨多). Some newcomers on the futures markets might also have “habits of thinking” (慣性思維 *guanxing siwei*) like “buy-and-hold” inherited from the stock markets.

The typical long factions had the following properties: firstly, many of these “investment funds” were loosely formed between a few friends (*jige dakuan couhe* 幾個大款湊合). The scale of capital was around hundred-thousands to ten-millions yuans, or £30,000 – £500,000, which was within the means of large retail investors (散戶 *sanhu*). Secondly, sometimes cohesion and consensus could be formed around charismatic faction leaders, or by a strong sense of geographical identity. Such *bang*-like proximity cliques might be unstable and transient, yet sometimes it was possible for them to produce aggregate market forces strong enough to compete with the spot trading factions. Thirdly, since they were cash-based factions, their funds had a higher degree of mobility compared with than the spot trading factions. The funds would flow in and out of various futures products and futures exchanges, as well as on other asset classes like stocks, real estates, and other businesses. Fourthly, their

guanxi with banks, government authorities, and the futures exchanges varied greatly, depending on personal ties. Usually they were more sensitive to changes in interest rates. Fifth, in general, the futures exchanges and regulators welcomed these investors to bring liquidity to the markets. Yet in the eyes of regulators and exchanges, they did not have the degree of perceived loyalty or regular trading volumes as the spot trading factions. They were more often classified as “speculators”, which implied that they were likely to face steeper margin requirements and more stringent compulsory position close-outs when regulatory actions were taken.

In actual trading, factions from both categories execute a combination of longs and shorts; in the case of corner events, different regional and industry factions would form and break coalitions in flexible manners. Nonetheless, understanding a capital faction’s leadership, origins of capital and geographical location helped to understand their market actions. Besides the ability to access and mobilize a certain size of funds, the identities and affiliations of these factions made a difference to how the funds could be used. It was the combination of monetary, social and political resources that enable the factions to make an impact on market events.

6.6 Gangs (*Bang*) and Charismatic Leaders

As well as proximity, capital factions in China’s futures markets showed properties of gangs, or *bang*. Gangs were built upon sworn brotherhood, loyalty (*yiqi* 義氣), extended kinship networks, and shared locality (Zhang L. 2001:105-107). Cohesion was achieved by mutual obligations between members. To attain personal spheres of power (*shili* 勢力) within the *bang*, reputation (*mingqi*, 名氣) was established by acts of risk-taking, demonstration of masculinity, and loyalty to fellow members (Zhang L. 2001).

The trader who told me about his corner team experience clearly cherished the value of loyalty and mutual obligations; he despised defection from one’s clique.

"When placing orders, cooperation and unity was essential. Once we were all going short, but one guy placed two long contracts on his own behalf. He was deeply trapped. When we discovered that, it took us so much effort to rescue him... we earned 300,000 yuan less."

The futures people looked up upon faction leaders as heroic figures. For a *dahu* (big player, 大戶), their reputation could amplify the effects of their capital. Other investors in the same proximity clique would follow the leader's actions, and aggregate a greater stream of capital flowing in the same direction. Although official regulatory spokespersons often condemned synchronized actions and corner events as "disrupting the order of the markets", unofficial industry discourse would rather give tribute to the masculinity and risk-taking acts of corner leaders. Take the example of Guan Jinsheng (管金生), leader of the short side factions in one dramatic market episode known as Event 327 in 1995. To struggle against rising futures prices against his faction caused by the Ministry of Finance's increase in T-bond coupon payout rate, within the last 8 minutes of the trading day on 25 Feb 1995, Guan's faction shorted bond futures worth 1,460 billion yuan (about US\$180 billion), which was one-third of China's GDP in 1994.⁵⁷ Guan threw 7.3 million⁵⁸ short contracts onto the market. Prices were pushed from 155.75 down to 147.4, turning the position of Guan's faction from a 6-million-yuan loss to a 1-billion-yuan profit. However, the regulators decided to roll back all the trades made during the last 7.5 minutes of the trading day, exercising a compulsory position close-out at the fixed price of 151.3 (Yao 1998:103-106; Zhang J. 2001; Li 2004; Wu 2006). Guan was sentenced to a 17-year jail sentence in 1997.⁵⁹

⁵⁷ Another version says 211 billion yuan, US\$26 billion.

⁵⁸ Another version says 11 million short contracts.

⁵⁹ Guan Jinsheng was accused of corruption charges that appeared to be irrelevant to Event 327. He was released on bail in 2003 for medical treatment, which was a disguised form of exile or amnesty sometimes prescribed by the PRC to political prisoners. According to Yuan (2002), CEDTIC, as the

Despite the jail sentence Guan received, the industry and media still saw Guan's battle on Treasury bond futures as a heroic epic rather than a criminal offence.

He did not lose the respect of the securities industry by serving his sentence in jail. One executive of a security firm says, "His achievements were remarkable. We are all trying to live out his former glory in our business." A female former member of SISCO staff said, "In the past I thought he was ruthless. Now I think he is the most perfect man!"

Li (2004) The broken wings of Guan Jinsheng, the king of securities (my translation)

In May 2007, an Internet search using the Google search engine on the Chinese words “管金生” (Guan Jinsheng) returned 18,800 results. Amongst the 18,800 articles, 23% (4,320) of them also contained the word “教父” (Godfather); 19% (3,520) contained the word “英雄” (hero); 8% (1,550) contained the word “傳奇” (epic); 3% (572) contained the word “罪犯” (criminal). Apparently behind the official discourse about financial order and stability, more internet users saw Guan as a heroic leader rather than a criminal.

Gangs in the wider society usually arose from the lower strata of society, where wealth, social status and kinship were inadequate to protect people from hostile or adverse environments, such as rural migrants in urban environments (Zhang L. 2001:105-107); or when they undertook risky activities, such as criminal triads. By appealing to loyalty and sworn brotherhood, gang members could obtain the much needed support and protection from each other. It was true that capital factions in the futures markets were not full-version of gangs, for they did not exercise rituals, hierarchies and organizational control to the extent of the Sicilian

leader of the long factions, should have made approximately 7 billion yuan of profits in Event 327. However, CEDTIC had rolled up a debt of over 7.6 billion yuan instead. Yuan and a few trader blogs believed that the actual profits were reaped by someone working in CEDTIC through “rat trading” (老鼠倉 *laoshucang*).

mafia or Hong Kong triads (三合會) (Zhang S. 1979), and the social bonding within capital factions was weaker. Nonetheless, it was intriguing that futures investors, as owners of capital, would form a social structure that resembled the marginal groups of society.

One plausible reason was that money could not provide all the protection they needed. Without the formal institutional umbrella of investment banks or fund houses, small-scale investors actually felt insecure and powerless in front of regulators, exchanges, and spot-based state enterprises. Once I talked to a broker about gambling:

Siu: Would the regulators see futures trading as a social vice to be restricted, something similar to gambling?

Broker: Not really. The truth is the CSRC is the real casino owner! The three exchanges are just "tiger machines" (老虎機 one-armed bandits)... they eat us. They feed on traders and brokers.

6.7 Trading Rules and Appendices

My field subjects kept telling me that the futures market was a game in *both* money *and* power. They emphasized that "dumb capital" was no match for political power – power could readily bring money, but at least in the case of China, it was much more difficult for money to be converted into useful forms of power. For lay investors who had some money but little political capital, gang-like capital factions were a possible way to aggregate funds, obtain useful clientelist ties, and provide mutual support. Capital is far from being disentangled from political institutions. Instead, *both* capital

and political power have entered the market mechanism, and *both* are commodified for intense exchange.⁶⁰

In summer 2005 I come across a vivid case that illustrates the formation of clientelist network across the private and quasi-public sectors. I am granted an internship at futures exchange Q. As a temporary member of staff in department G, my main responsibility is to translate a draft set of trading rules for a “coming-soon” commodity derivative product from Chinese into English. The product has already passed its first phase of product design, yet it is caught in a long and uncertain process, pending for the approval by the CSRC. The set of trading rules has concrete mechanisms covering issues in contract specification, risk management, and hedging. Yet when it comes to the section on market making, the rules become intriguingly abstract and vague. The clauses state principles such as “equivalence in rights and obligations” and “for the market’s liquidity and efficiency”. However, the actual obligations and benefits for market makers are left open, to be specified between the exchange and individual market makers in individual agreements. A sample of such an agreement is included in the appendix of the draft document of the rules, with most of the clauses subject to modifications, and all the numerical parameters left blank. The blank items include the minimum transaction volume a market maker has to fulfill, the maximum response time for giving bid/ask quotes, and the discount on commission fees. The main text of the rules carries an explanatory clause, stating that such an arrangement can “contribute to the stability of the trading rules, while leaving flexibility against market changes”.

This appears to be an extreme form of interpretative flexibility. “Rules” are left as a stable but empty husk, while the judgement between legitimate and transgressing behaviours is passed on to the appendix and individual agreements, subject to a constantly shifting framework on a case-by-case basis. Four brokers and

⁶⁰ See also Wank (1999), Zhang L. (2001:107-110), Kipnis (1997), Yan (1996) and Yang (1994) for clientelism in post-Communist China.

analysts have voiced out their discontent and distrust against exchange Q in separate interviews. Some excerpts are quoted here:

Take the example of exchange Q. Now it has such a bad reputation that some of us would avoid trading there altogether. A significant proportion of their trading volumes on E and F (futures products) were fabricated by market makers, who were aligned by the exchange itself. When the exchange and its market makers got into a close pact, outsiders found it extremely unfavourable to trade there. You cannot peer through the volume of "real" transactions... Once you step in, you get eaten.

We rarely trade products E and F. Those people just draw their own funds to do it [produce trading volume]. Their prices are not linked up with international levels, and pricing is not a self-initiated market mechanism. You know what we say? People from province Q are fraudsters. They've let their markets go so rotten that the state can do nothing to it.

Exchange P is much better, but we still hear occasional cases. In 200X the long side pushed up the prices of product G. The exchange did not allow the short side to increase their open position, claiming that delivery warehouses had reached their full capacity. The short side was forced to close-out their positions instead. We know there had been some affiliated internal interests there.

The investigative newspaper report by Luo (2005) gave an in-depth and critical review on the market making system in China's futures market, verifying that a problematic situation indeed existed on exchange Q on products E and F.⁶¹ According to Luo, the market making arrangement of exchange Q has not been formally approved by the CSRC, yet the new practice is silently endorsed in 2002 when the trading volume of products E and F fall to dangerously low levels. Some designated market makers enjoy extremely low commission fees on exchange Q that

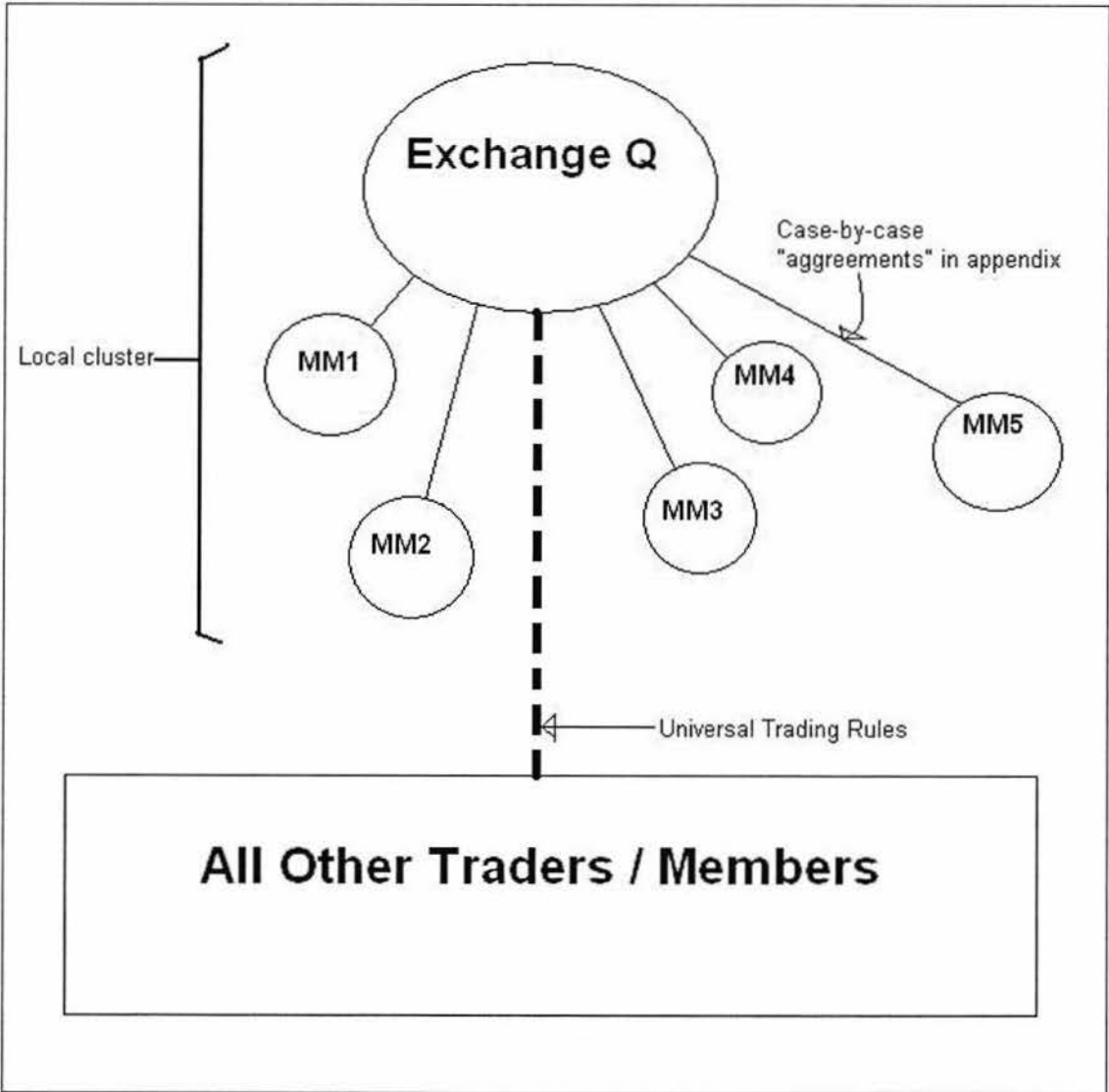
⁶¹ There is no evidence to assume that the same condition applied to the whole Chinese futures market in general, i.e. other futures products at exchanges P, Q and R. In fact in 2006, exchange Q has launched other commodity futures products, which are gaining better industry trust and liquidity.

literally approach to zero. I asked an executive of exchange Q in a private conversation:

Siu: I don't understand this market making system. Yes you get transient trading volume, but the exchange loses its reputation and public trust in the long run... it's like quenching thirst by drinking poison. Why does the exchange still do it?

Executive: We don't want to, but we have no better ways. Look, how many people are on payroll here? We need the liquidity.

Fig 6.1 The relationship between Exchange Q and its members



The relationship between Exchange Q, its market makers and its members can be summarized by Fig 6.1. The relationship between the exchange and most of its members is defined by a set of trading rules equally applicable to all members – represented by the thick dotted line. Meanwhile, the market making system of products E and F is a temporary add-on feature devised by Exchange Q. A handful of market makers (denoted by “MM” in the diagram) enter into individual agreements with Exchange Q. Each individual agreement may be different – represented by the thin lines of variable lengths. This market segment is spanned by the flexible and contingent association between Exchange Q and the market makers.

The links have the following properties: Firstly, each particular relationship is uniquely negotiated and established. The content of each relationship depends on the network position, social distance from the exchange, financial and social capital, plus track records of a market maker. Secondly, the content of these agreements (including commission fee, trading volumes to fulfil, and margin deposits) is subject to flexible change. Thirdly, there is an element of mutual exchange: the market makers bring trading volumes to the exchange, while their commission fees are marked down by the exchange. Fourth, the add-on feature is a contingent arrangement in response to declining trading volumes of Exchange Q after the close-down of a major product by regulatory orders. The exchange knows that the arrangement is sub-optimal, and is never high-key about these arrangements in promotional materials. Fifth, the arrangements are not transparent or made public. Sixth, there is an attempt to make these links look more formalised. Each “agreement” takes the form of a contract. The contract is based on a template specified by an appendix of the trading rules, yet the important parameters are filled in on a case-by-case basis. Seventh, in effect the agreements can serve as a potential shortcut that pre-empts the general trading rules, forming a cluster of market makers above other members. Eighth, other members and traders are aware of the market making arrangements, which damage their trust in exchange Q, and their willingness to participate in this marketplace. Ninth, staff members of Exchange Q see such

arrangement as an ad-hoc solution to the immediate danger of survival and low liquidity.

Figure 6.1 can be understood as a dual structure between two modes of social organisation. The bulk segment of the market was operating based on legalism, where a set of universal trading rules was applicable. Members were subject to the same rights and obligations defined by codified rules and procedures. In the words of Fei (1948, 2004), this was the “organisational mode of association” (see chapter 2); this part of the market was the official version how capitalist futures exchanges were supposed to operate.

The ring of market makers can be understood as an exceptional mode of market mechanism, initiated by the exchange as an “exception handling” mechanism to deal with the survival crisis of low liquidity. The market makers are also happy to accept their exceptional status, as the result of case-by-case negotiation enables them to take advantage of their special status to enjoy lower commission fees. Notice that in this exceptional mode, the actors are actively establishing a ring of relationships⁶² around themselves based on regional clientelism (Wank 1998). Such a ring was formed in order to obtain protection, benefits, better judgement in calculation, to achieve their goals, and for future prospects. Both sides enter the symbiotic relationship for survival purpose, which is less profitable than the “growth coalition” in Los Angeles described by Davies (1990). Nonetheless the case of exchange Q is still a regionalised coalition formed across the public-private boundary for local benefits, where outsiders find it difficult and unfair to compete, and it is not a sustainable way of development on a long run.

⁶² The counterparts of relationships could be social institutions, individual humans, technological artefacts, or cognitive artefacts (like information, data, and algorithms). See chapter 7.

6.8 Reflections at a Crossroads



Fig 6.2 The busy Beijing crossroads with traffic lights

During fieldwork, another observation in urban Beijing helps me to think further behind the market making system of Exchange Q. There is a busy crossroads outside the futures brokerage company where I served my internship. Each driving direction has 3 parallel lanes, such that the crossroads is a hub of 24 lanes (Fig 6.2). By crossing the road every day, I quickly learn that a pedestrian green light in Beijing means something quite different from places I grew up with. On that crossroads, the pedestrian's right of crossing under a green light can be pre-empted by emergency vehicles (ambulances, police cars and fire engines); anything that turns right against a red light (紅燈右轉, *hongdeng youzhuan*); anything with two wheels (e.g. bicycles, mopeds and motorcycles); anything with three wheels (e.g. rickshaws); sometimes, vehicles of high-ranking officials; and sometimes, vehicles with a military car plate.

Often by the time all the exceptional vehicles go clear, the pedestrian green light is already over, and on the next pedestrian green light all the exceptional vehicles will appear again. Sometimes the pedestrian has no choice but to cross the road against a red light.

Exceptions are a set of cases, to which the formal rules are seen by the participants as not applying. According to existing traffic laws in Beijing, exception 1 is a valid course of action; exception 2 is legitimate, but the driver should give way to the pedestrians first. Exceptions 3, 4, 5 and 6 are not explicitly defined by laws at all. Yet in practice all the six categories of exceptions are exercised, and there is a considerable gap between actual social practice and the traffic rules. The exercise of exceptions actually serves to redistribute the rights of crossing from some agents to others: from non-urgent users to urgent users (exception 1); from pedestrians to drivers (exception 2); from regular cars and trucks to alternative forms of vehicles (exceptions 3 and 4); and, from lay people to state officials (exceptions 5 and 6). Behind the informal redistribution of crossing rights, we can notice the elements of class (exception 2) and social status (exceptions 3-6) at work.⁶³

If we consider rules as a semi-processed form of distributed cognition (Hutchins 1995; Hatherly, Leung and MacKenzie 2005; MacKenzie 2006 chapter 2), the cognition process does not end within the rule-making process itself. Instead it proceeds onwards in every instance of application, when the rules are matched and applied against each individual scenario to complete the process. The traffic lights example shows that in a rule-following system, how a community perceives, enacts and creates exceptions from the rules can lie outside the text of the rules. However it influences the overall outcome and performance of the system – for example in this case, how the opportunities for crossing were actually distributed. Social agents do

⁶³ For exceptions 3 and 4, alternative vehicles are sometimes treated as non-entities. For exceptions 5-6, vehicle owners with higher status get the priority to cross first.

not follow the rules blindly, but sometimes they take the initiative and manipulate the rules to their own advantage.

Exceptions are the products of **negotiation** between social agents and the existing rules. Such negotiations can be obvious during a time of **social change**. In our Beijing crossroads, the right-turn drivers are ruthlessly pre-empting the crossing rights of pedestrians, partly because they are gaining a new and rapidly rising class status – namely as car owners in contemporary urban China. The pride and confidence of this “rapidly rising” group is confirmed by some car salesmen I met in Beijing. In fact in the first half of 2005 in Beijing, the sales of private automobiles increased 22.56% from the previous year (Tao 2005). The superior feeling of car owners is further embodied by their physical speed and relative safety over pedestrians, which enable the drivers to seize an upper hand on the rights of crossing. In the times when the interests, status and values of different social groups are on rapid shift, new exceptions are formed.

A second perspective on exceptions is from a systemic design approach: exceptions are set up **to handle danger**. Here *exceptions* mean handling unanticipated events, especially those related to risk and damage, so as to improve the overall system resilience. The term *exceptions* is borrowed from “exception handling” in computer science – the occurrence of conditions that change the normal flow of programme execution. The term refers to error conditions, such as the unexpected encounter of invalid input, hardware failure, and dangerous emergency. In mechanical control systems when a passenger is stuck between closing train doors, or when a power failure occurs on a crane, even the most routine mechanical system has to follow some interrupt subroutines or failsafe procedures. Such exceptions are the subversion of the usual programmed logic in order to handle the immediate situation. In this sense, exceptions can equip a system of pre-determined logical procedures with some limited capacity to react to open inputs and critical changes in the surroundings. In our Beijing crossroads example, the first exception belongs to this type: emergency vehicles were allowed to override the rules. Their priority came

from the fact that they were handling something linked with danger and critical damage.

6.9 Network-based Cognition

How do investors behave? This chapter has portrayed how financial strength, charisma, loyalty, teamwork, political capital, and embedded identities (e.g. spot and spotless identities; industrial, provincial, municipal identities) produce capital factions. When capital factions interact with each other, external contingent factors such as interest rates, policies and weather can exert variable influences on market outcomes. Investors are connected as flexible, loosely formed social units, continuously in flux. The markets are bound to be unstable and uncertain, because the subject matter – social aggregates formed by market agents – has unstable and uncertain properties, and these aggregates are subject to frequent reconfiguration.

From this perspective, we can see that the view of the investors as standalone and rational individuals, as assumed by neoclassical economists, is unrealistic. It is also simplistic to think that investors act like thoughtless herds or crowds, where imitation and contagion easily spread across the community. Some researchers in finance have built quantitative models of markets, taking a more realistic view of markets as interdependent social aggregates with conditional, variable and contingent properties.⁶⁴ Under the view of markets as an assemblage of unstable social aggregates, a market is less like an economic unit acting under some calculable scripts. It is more like groups of investors as interdependent, flexible socio-economic aggregates, interacting with each other, and subject to the influence of contingent inputs. For the market as a whole, part of the cognitive properties and rationality resides in the morphology of social connections, the group dynamics, charismatic

⁶⁴ For example, Forbes and Rigobon (2002) studies contagion of regional markets in financial crises. They find that the markets are better described as interdependent under conditional inputs.

leaders, and political capital possessed; part of it resides in the ideology and knowledge tools employed (see Hutchins 1996, Hardie and MacKenzie 2006. For knowledge tools, see Chapter 6). Distributed cognition contains open-ended uncertain properties that cannot be sealed up in a closed script.

The concepts of Fei (1948) and Qu (1961) on network-based rationality are helpful in understanding market connectivity discussed in this chapter. Fei's concept of "differential association" (差序格局) and Qu's concept of rule of *Li* (禮治社會) were initially used to analyse social order under Confucianism.⁶⁵ Under a network-based rationality, whether a social action is appropriate or not largely depends on the relative network positions of the actors involved. No universal code or rule is applicable to fathers and sons, masters and servants, or winters and summers alike. Ethics and values should be calculated according to social distance and hierarchy; differential treatment by network positions is expected.

The commodity futures markets' capital factions, Exchange Q, and the Beijing crossroads are displaying properties of distributed cognition and network-based rationality. The circuits of cognition largely reside across the relative positions of the social network, not only within individual human actors or pre-written rules and scripts. The implications of this chapter are two-fold. In the study of markets, more emphasis should be given to flexible social connections in market aggregates, and how network-based rationality is actually distributed over the markets. This may serve as a correction to the earlier over-focus on mathematical precision, certainty and predictability, and yield a more realistic understanding of markets. In recent years Chinese regulatory officials emphasize that they would like to cherish the "characteristics of Chinese markets", and express their concerns over the lack of self stabilizing mechanisms (as presented in public speeches, such as Zhou 2007). In modern markets under the influence of globalization, typical network-based

⁶⁵ Cultural essentialism should be avoided in applying these concepts. For details see Chapter 2.

rationality systems such as Exchange Q will have difficulties in transparency, fairness and scalability, especially when they need to integrate with global markets. Tension is likely to arise between the art of *guanxi* (social relations) and the cultural heritage of network-based calculations as “Chinese characteristics of market development” on one side, against rule-based rationality, public trust, fairness and transparency of public organisation governance. As the markets of China migrates towards larger scale, more sophisticated financial products and integration with global markets, the tension between rule-based rationality and network-based rationality remains a major challenge to be resolved in the nation’s development of modern markets.

Chapter 7

Priests and Prophets: Knowledge Tools in the Markets

7.1 A morning in a brokerage firm⁶⁶

Commodity futures analyst A starts his day at 7:30am in Beijing. He logs on to an English web site called futuresource.com. A dozen of overnight news on soybean around the globe pops up: the United States Department of Agriculture (USDA) expects the volume of soybean exports to go up to 500-600 thousand tonnes in the coming week. Rainfall in Brazil's soybean production zones is heavy. Shipping ports in Florida are resuming service after hurricane Katrina. The US Securities and Exchange Commission (SEC) advises investors not to overreact to the hurricane. Then he quickly switches to Webstock [*Wenhua Caijing*, 文華財經], a futures trading software that was used by over two-thirds of the industry.⁶⁷ He opens a candlestick chart (see Fig 7.1) on domestic soybean futures; then he draws a few lines on screen, finds the intersection, and types a quick paragraph. He summarizes the overseas news and gives the day's advice on soybean futures: "Narrow-range *zhendang* (vibrations 震蕩) expected today. May gradually build up short position. Resistance at 2600, stop loss at 2645, flexible operation." He presses "send" and

⁶⁶ This section is drawn from my field notes while working as an intern in a futures brokerage firm in Beijing. Events happening in this "single morning" are a condensed summary of my participant-observation over a number of days, across a number of physical locations.

⁶⁷ The English name "Webstock" comes from an earlier time when the software company was trying to develop software for the stock markets of China. Later on the company specialized into futures, and became the mainstream software being used there.

[illegible]

The top panel shows the live quotes of selected futures contracts; the lower left window shows the candlestick chart of the highlighted contract, and its trading volume. All transaction activities on that contract keep scrolling up in the lower right panel.

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usually have a time frame in terms of weeks or months. For the day his focus lies mainly on Shanghai copper. Copper has been rising for over two months. He likes the return but now it looks like caution is appropriate. His closed fund gives a performance report every 3 months; and he has to put the bulk of his own funds in. On top of return from his own share, he can get a 30% of profits earned for clients' capital, plus part of a 5% management fee.

Outside his *dahushi* (big client room), there are 7 cubicles in the office "pool area" where the brokers and analysts sit. Young broker C has just returned from his client recruitment seminar in a nearby town yesterday. At 8:00am, he opened his Webstock interface. He checks for 5 technical analysis indicators. The rise in copper is likely to continue. He places a few orders on his simulation account, hoping that one day he'll be ready for real trading. Legal secretary D also arrives at the office and gets herself a cup of tea. She is ready to continue her work on a new draft of rules and agreement terms for a new closed fund, to be launched in a month's time.

Back in the brokerage firm's national headquarters a few hours' train away, risk controller E was checking her screen for all the margin call demands she made yesterday. Accounts with red, yellow and green indicator lights appear, showing the assessed level of risk and leverage associated with each account. She picks a few accounts and goes on making phone calls to clients. Usually these clients will increase their margins or reduce the positions (on futures) they hold, although in some cases she can enforce a compulsory close-out of the client's positions.

At 9:00am, a long red candlestick appears on the screens of B, C, D and E for copper. The market opens. On the bottom-right corner of their screens, lines of transaction prices and volumes scroll up. Someone places a 200-lot order and the red line jumps up. Trader B, broker C and risk controller E are keeping close watch over their screens. As the red line lengthens and shortens, the net values of their various portfolios change in real time. A 300-lot transaction occurs, pulling the first minute candlestick to the green side (falling prices). The candlestick immediately bounces back to the red side as more trades appear. The first minute is over, the first candlestick remains red.

On the screens of analyst A, trader B, broker C, legal secretary D and risk controller E, they use instant messenger software like MSN, QQ⁶⁸ or WenWenTong (文文通) to stay in touch with a list of contacts. These contacts cover relatives, college friends, former colleagues and business contacts, fellow traders, brokers, clients, analysts, staff in food and oils companies, people working in manufacturing companies, and bankers. Broker C types on his QQ: “Copper is still rising.” His counterpart “Shenzhen Falcon” types back: “I won’t hold overnight. Day trade should be ok though.” Trader B types to banker F, “Heard anything about renminbi rate?” Banker F types back, “No.”

7.2 Classrooms in the Markets

The futures analyst, trader, broker (such as A, B and C) or more generally the “futures investor” do not arise spontaneously out of 1.3 billion people. Instead, basic concepts have to be inaugurated, skills have to be learned, terminology and tools have to be familiarized, and values have to be promoted, to create and maintain a market community that works. I was surprised by how much time the futures people spend in classroom settings and training. The three exchanges, the China Futures Association, larger brokerage firms, and trading interface software companies frequently organise training sessions for various target groups.

Those training session given by futures brokerage firms carry a mixed purpose of marketing, education and evangelism. In summer 2005, the futures markets had too many service providers chasing after too little capital.⁶⁹ Most futures companies were under pressure to acquire new clients (*kaifa kehu* 開發客戶), and

⁶⁸ The most popular instant messenger software used in China, as in 2005.

⁶⁹ According to figures from China’s Bank Regulatory Commission, in 2004 China’s futures companies held total assets of 21.2 billion RMB.

young brokers often had to travel to smaller or faraway towns, for example, from Beijing and Tianjin to peripheral areas in Hebei, or around Shijiazhuang, to conduct client acquisition seminars. In a geographically dispersed country, the need to invest is partially stimulated, if not totally created, by these brokers-evangelists who infiltrate to places further away from commercial urban hubs. These recruitment sessions usually include introduction to commodity futures, demonstration of online trading and chartist tools, market outlook discussion, and onsite registration. Once I also heard a field subject appealing to urban-rural and gender identities in a seminar, “since I started working on futures, girls in Beijing look at me with new admiration and respect.”

When non-clients become clients, other seminars are held to shape their futures trading behaviours. My Beijing brokerage firm held a series of Saturday seminars like “introduction to soybean trading” and “programmed trading” for clients. These classroom activities have the mixed purpose of client retention, boosting trading volumes, and building a more sustainable client base. A manager in city P associates the rise of classroom activities with better professional ethics of the futures brokerage industry:

In the past, brokerage houses had a bad practice known as “harvesting green veggies” (割韭菜). They just acquire new clients, suck their money, let the clients go broke, and then find new clients as replacement. But as the futures market has developed for 15 years, this is not sustainable now. It is more and more difficult to get new clients. Better brokerage houses are now trying our best to retain existing clients: give them sensible advice, keep them informed about news and useful skills, hoping that they can stay alive and, in return, keep us alive. That’s a win-win situation.

Futures exchanges are also involved in providing training sessions. Take the example of the mass scale two-day training workshops run by Exchange P (see Chapter 4). In summer 2005, Most of the farmers and rural officials are familiar with spot trading of soybeans. When the introductory classes explain the basic concepts of hedging and speculation, many participants were extremely familiar with the price range of spot,

the weight and yield of soybean and corn, as well as seasonal fluctuations. Yet many had never heard about commodity futures before.

**Fig 7.2 Video snapshot from training course:
farmer counting piles of cash**



What interests me is how the course materials attempted to shape the identity of rural officials, farmers and spot trading companies as “hedgers”. In a ten-minute video display, participants were shown a video containing a China Central Television (CCTV) news clip. The clip showed farmers happily counting piles of banknotes at the end of their harvest seasons (Fig 7.2), because they had “exercised hedging”. Furthermore, the “Thousand Village Ten-thousand Doors” participants were also given a comic booklet in their training pack. In the booklet a young urban man in a blue suit and tie told an old farmer in a white vest and conical straw hat (“Uncle Cow” 牛大伯) what commodity futures were (Fig 7.3). Speculation was presented as the risky sport of surfing, which required very high skills – demonstrated by the urban young man riding the tides in the comics. The class instructor explained to the participants, “as long as you have spot in your hands, you will not lose money. Do hedging, don’t speculate.”

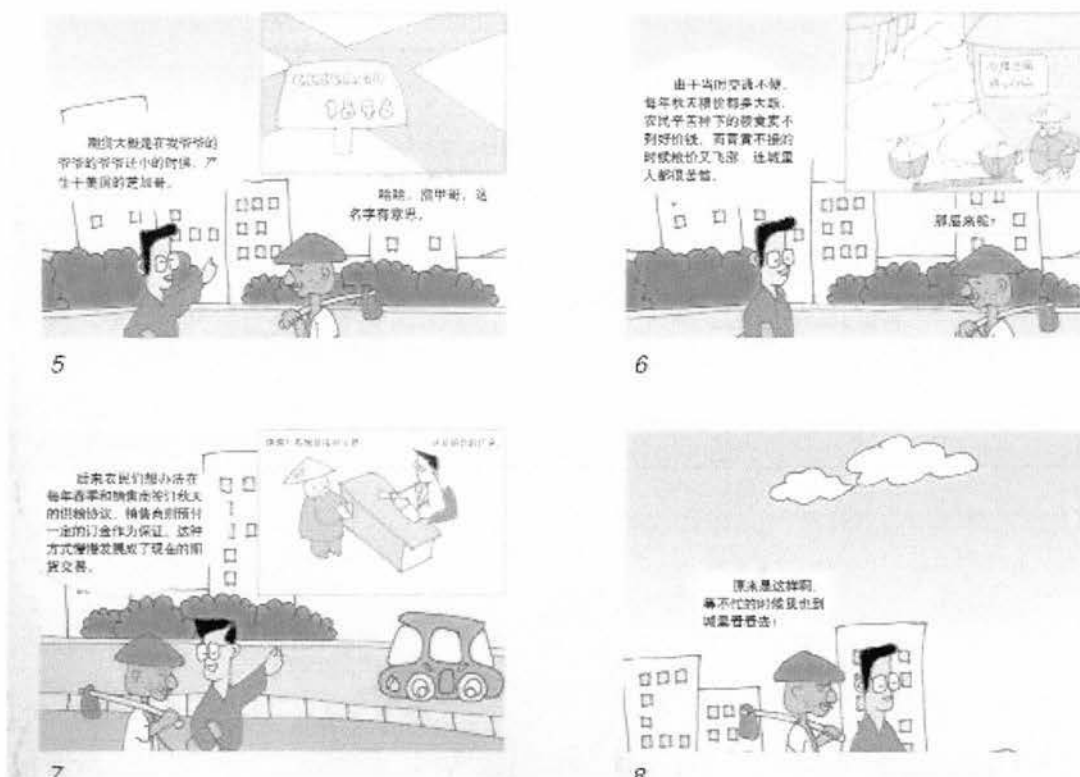


Fig 7.3 Urban guy and Uncle Cow: Identities of hedgers and speculators

The 2-day training courses include a simulated trading session (Fig 7.4), in which participants were given a computer terminal to simulate the online trading interface of the Webstock software. The onscreen windows of candlestick charts, newsfeed, and live quotes were synchronized with those in the actual market's trading interface (Fig 7.1); the only difference is that the transactions made under simulation would not exert an influence on the real market. Each participant started with a simulated account of one million renminbi. With a leverage ratio, she was free to trade on any Chinese commodity futures products for one hour. The participant can monitor her margin and account balance through a small window on screen (Fig 7.5), and the



Fig 7.4: A simulated trading session

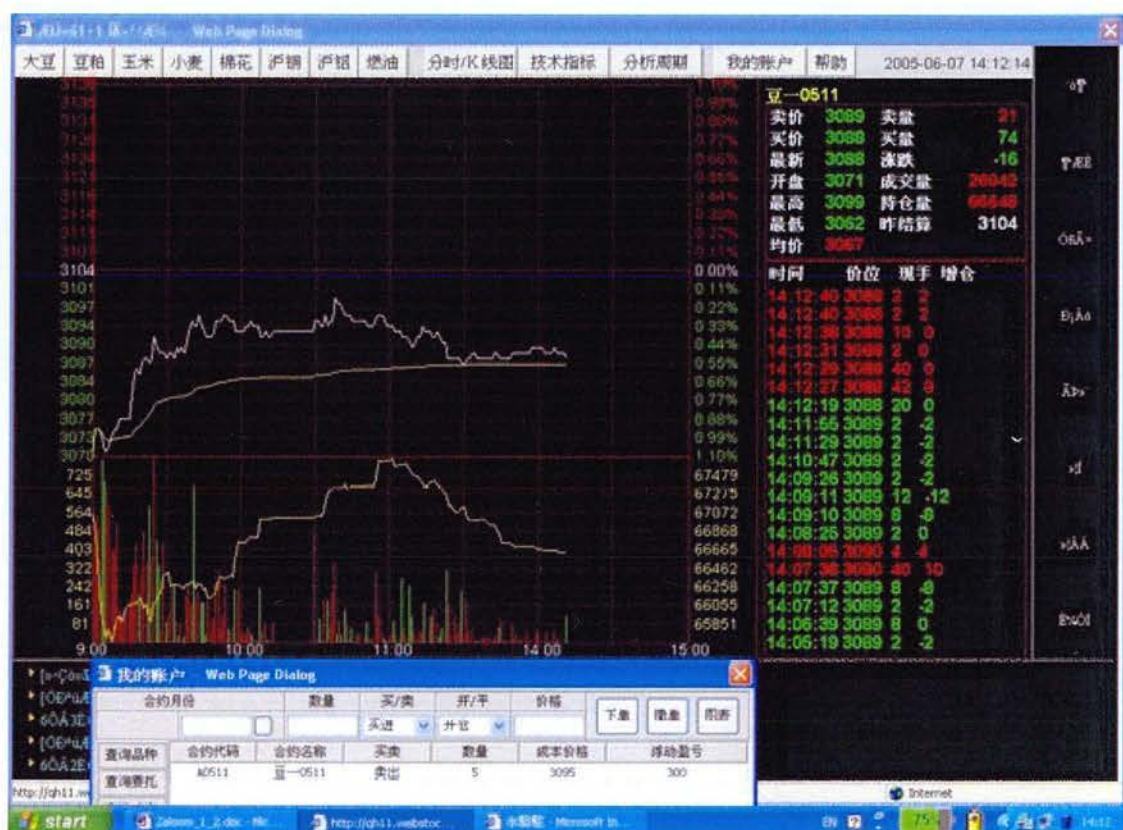


Fig 7.5: Screen snapshot during simulated trading.

The charts on the left show the price and trading volume; the panel on the right shows all the transactions on the contract "Soybean one 0511". The window at the bottom shows the outstanding profit/loss of my virtual account.

class instructor could have an overall view of the outstanding balance of all participants. At the end of the session, awards were given to the top three traders in class.

Once the instructor said “start”, the candlestick charts on screen started to move. I was staring at the 0601 contract of soybean 1, and quickly shorted 100,000 renminbi. A transaction window on the right, scrolling up line by line, showed the price and volume of individual transactions (Fig 7.4). Rising prices gave red lines, and falling ones were green. The current 1-minute candlestick was also flickering, red for prices above the opening price and green for those below. When prices are linked up with my account’s virtual balance, the speed, the colours, the rhythms, and emotional response suddenly became very vivid. Green was going well, red was the market against me, and the simulation trader was fully immersed in colours, numbers, and shapes of the candlestick charts. After a few flip-flops, finally the first candlestick stood as a red one, and another new candlestick started to flicker. The time dimension seemed to change – with all the ups and downs, only one minute has passed. As a novice I was trying to exercise “stop-loss”, which means when the market moved against me from 2912 to my target limit of 3057, I had to close my positions to limit the loss. But again I experienced that it was more easily said than done. With all the visual stimulations and emotional excitement, it took a calm mind to stick to one’s initial trading plan. I changed my plans a few times, increased and closed my positions for a few times, and meanwhile started trading copper instead... which was definitely not the sign of what was considered as a good trader. Eventually after one hour, my virtual account had a 3% loss. My classmates had results ranging from +30% to -60%.

Amongst all the participants, a small number of people on the “Thousand Villages, Ten-thousand Doors” course were already trading some soybean futures for soybean farms in Heilongjiang; most participants on the 5-day intermediate futures course had some experience in futures trading. However, around one-third of the “Thousand Villages and Ten-thousand Doors” participants had barely been using the

computer at all, and some had to start by learning how to use a mouse and the windows interface. Many of these participants could only sit through the simulation session idly, as they were not able to trade on their virtual accounts. In the age of online trading, basic computer literacy, amongst other skills, is essential to turn “non-traders” into commodity futures traders.

Sometimes when conflicting interests and industry practices coexist, training activities can become the frontline of negotiation. Exchange Q had a long-term attempt trying to win CSRC approval for rolling out options; in 2005 Exchange P also attempted to launch weather derivatives. Both exchanges organised industry seminars and training courses on the corresponding novel products in May 2005. Although both initiatives have not succeeded (not at least at the time of writing), such training activities were possible bottom-up channels of policy negotiation. The aggregation of industry support was a possible way to “talk back” to the state’s regulatory grip.

7.3 *Authorities in the Markets*

Besides attending training classes and seminars, the market people actively seek for mentors and role models in the markets. During fieldwork, I came across a daily five-minute stock market analysis program on China Central Television (CCTV) at 11pm. The program hosts addressed the guest analyst as “teacher” (*laoshi* 老師) in high respect, and the analyst talked for five minutes every night. Usually the analyst showed a candlestick chart blinking with brightly-coloured dots, lines and circles, and he (always a male) talked in tones of authority, precision and confidence.

In the upcoming three days, prices of the Shanghai ‘A’ shares index will bounce within this zone. [yellow lines blinking on a dark screen] We should pay attention to the support line here, at XXXX. [pink line blinking] Once the support line is broken, prices will slide down to another level of XXXX...

After switching off the television, I found that the image of a solemn expert and the blinking yellow and pink lines mesmerising. Those days whenever I thought of the

Shanghai 'A' shares index, those yellow and pink lines came up as a mental picture. Especially when I was not too familiar with the index, the blinking coloured lines provided by an expert seemed to be handy reference points against unknowns and uncertainties.

In modern China, it seems that traditional manners and respect – like giving seats, pushing doors for others, or waiting patiently in queues – were quickly disappearing in urban cities.⁷⁰ Yet in the futures markets, people have a high respect for experienced traders, brokers and analysts. On industry seminars and internet forums, people usually call each other “teacher” (*laoshi* 老師, usually used for analysts and former academics), “master” (*gaoshou* 高手, a term borrowed from Chinese martial arts fictions, usually used to address experienced traders), and “expert” (*zhuanjia* 專家, a respectful way to address any experienced industry personnel).

Speakers of industry training seminars are often surrounded by members of the audience for their instant messenger (such as MSN, QQ and Wenwentong) contacts. Lay investors were eager to keep in touch with experienced traders for information, insights and advice. With an instant messenger box placed next to their online trading screens, the cost of maintaining ties with other market people is lower.

Most traders keep their instant messengers connected during trading hours. They keep tuning their trading strategies according to the experts they trust. It is through such communication that learning and imitation become a continuous process. Jargons, procedures, paradigms and attitudes are passed on, while the learners take hands-on practices upon the current market situations. The following is a sample extract from a “sharing” section of a futures website, describing how novice A gets advice from experienced trader B at the end of a trading day.

⁷⁰ This is a general impression in 2005 living in the five fieldwork cities, as compared to other Chinese societies in Hong Kong, Taiwan or Singapore.

A: May I consult for your opinions... If I give you my analysis on today's a0309 candlestick chart, can you point out my mistakes?

B: OK.

A: Today a0309 is rolling down with a zig-zag. Combined with yesterday's candlesticks it's gloomy clouds all over. A fall is expected. But the midpoints of the candlesticks seem to move up and contradicts the falling trend. The 5-day MA [moving average line] is spiking through the 10-day MA. The 10-day MA goes down, but the 20-day and 30-day MAs go mildly upwards. In the recent future the market is still seeking for a direction. It's just bouncing to and fro.

B: That's correct but not complete. You also need to devise a strategy.

A: What have I missed, what kind of strategy do I need?

B: Each candlestick is not a standalone entity. It should be analysed in the light of patterns. What's the pattern from 4 Mar to 11 Mar?

A: ???

B: It's a reversed island, implying strong support at this position.

A: Reversed island on a high price range? I don't believe it. Reversed islands should be at lower ranges!

B: High and low are relative. The value nexus is rising, and the price takes in all factors. You should also take a look at the charts of US soybean. If US soybean form a big triangular breakthrough, it will reach 630-650 US cents.

A: Yes, that's right.

[期人期事 http://www.funuo.com/newq/qhsj/xta/Futures_life/Life_data028.html

Accessed 30 Sep 2007, my translation]

Besides trusted experts that they can talk to, the futures people like to talk about legendary figures out of their own reach. Take the example of Zhang Wenjun (張文軍), who got the nickname "number one futures trader" (期貨界第一操盤手) and "number one futures killer" (期市第一殺手) in China's futures circles. I did not have

the opportunity to meet him personally, but a number of brokers and traders often mentioned his name. Zhang rarely gave interviews to the media, and Yang (2006) in the *Futures Daily* was the only full interview I could get hold of – the article got widely cross-posted on futures blogs and forums. The report describes Zhang as “a calm and refined” (冷靜文雅) man. Zhang came from Dalian, and he started working in Dalian’s hotel Furama in 1988. In 1992 he started trading bank-issued bonds, and in 1993 he joined Dalian’s first brokerage firm. He moved from a futures broker to an investment adviser, then became a trader (*caopanshou* 操盤手). In 1996 he started trading for himself as an individual. Some field subjects told me that it is impossible for me to talk to Zhang, as he is a low-key person and he keeps a distance from all forms of spotlight. People marvel at his experience of going bankrupt for four times, each time being able to start from scratch again and climb back to the heights of wealth. People talk about his fast and intense style of day-trading, his legendary transaction volume, his emphasis in intuition, his principles of investment, his personal philosophy, and quote his words. They also gossip about his ranking in trading volume, how the DCE rebated commission fees to him as an award, his marriage problems during one of his bankruptcies, how he managed to make novel profits from trading although he had to be hospitalized for two weeks, and how he managed to turn around from one particular adverse position by soliciting money from “old ladies’ accounts”. The more they talk about Zhang Wenjun as an industry legend, the more they project their hopes and imagination of what a successful person in the markets should be.

Foreign role models of success like Jim Rogers, Leo Melamed, George Soros, and Warren Buffett were frequently quoted in talks, magazines and newspapers. Take the example of Leo Melamed, who was the former chairman of the Chicago Mercantile Exchange (CME), and he was well-known in China as the “father of financial futures” by his leading active role in the development of financial futures in the 1970s-80s. On 30 Sep 2005, Leo Melamed went to Zhengzhou to launch a Chinese version of his book *Leo Melamed on Markets*, and I had the opportunity to sit among an audience of two hundred people. Only 3-4 local journalists struggled to

talk to him after the event. The rest of the audience were from the futures industry, but they only watched him in awe from afar, silently taking notes with admiration. At the end of the event when Melamed took a souvenir red jacket from the Zhengzhou Commodity Exchange, he wore it immediately with glee. The action left some of my field subjects bemused and startled, as this friendly gesture was not expected from a high powered figure like Melamed.

Sometimes these foreign investment gurus were treated with a dedication that was nearly religious. In a large conference room of one futures company in Beijing, I found a quote from George Soros etched on a wall of mirror in a gigantic font, overlooking the whole office from a central position, “I come to this world as a penniless pauper, but I will not leave it empty handed.” [Original English source unknown; my reverse translation from Chinese into English]. The company’s manager proudly presented it to me as the motto and spirit of the firm, “Our members of staff bear this in mind every day. It reminds us about the zeal to chase after our dreams.” The rise of investment gurus as role models seems to reflect a simultaneous, deeper shift of values. A young financial journalist in Beijing told me that starting from the 2000s, the young generation of China has finally discarded the last trace of moral burdens against the pursuit for material wealth. Getting rich had once been associated with corruption of character in the 80s or early 90s, but that was no longer true for graduates in the 2000s. “Our classic belief was that a gentleman with respectable character should lead a modest life (君子固窮)... nobody believes in that anymore. Now we can blatantly say that we want to earn a lot of money, and it’s totally ok. As long as what I earn are normal profits from the markets, no one would say anything against that.”

7.4 Fundamental and Political Analysis

When Ellen Hertz (Hertz 1998) did her ethnography on Shanghai’s stock market in the mid 90s, she listed fundamental analysis, technical analysis and political analysis as the three major forms of analysis in the stock markets. Fundamental analysis is the

prediction of commodity prices by supply and demand factors: production, consumption and inventory. The analysis of factors such as changes in consumer market trends, weather and natural disasters for agricultural commodities, currency exchange rate, export and import forecasts belong to fundamental analysis.

In a pragmatic light, most field subjects who practise fundamental analysis in China's commodity futures market are aware that the statistics and figures they use are incomplete, contain errors, and are viable to human manipulation (see also Didier 2007 and Holm 2007). While practitioners of fundamental analysis still use such knowledge intermediaries to estimate the "intrinsic value" of prices, they are aware of possible discrepancies between statistical representation and the world "out there", and are willing to make adjustments on the figures from time to time.

On the five-day training workshop in City P, a soybean analyst talked about how to use fundamentals by giving an example of the floods in 1998. Indigenous knowledge in farming was needed to translate seemingly apparent news into useful expectations of supply and demand. However, not many market participants had the adequate expertise in soybean farming.

"In that spring and summer, the news said that Heilongjiang (黑龍江), Nunjiang (嫩江) and Songhuajiang (松花江)⁷¹ were having very bad floods... Harbin (哈爾濱)⁷² could only be reached by planes. When we heard about the floods, many traders just took a long position. The prices of soybean rose from 2400 on 11 May up to 2700 on 24 Aug, but they were proved to be wrong. The harvest was not bad at all! In autumn, prices quickly rolled down to 1800, and tumbled all the way down until June next year..."

"To find out why, I went to a soybean farm, got up at 3:30 in the morning, and squatted by the fields with soybean farmers at 4:30, smoking. The guys said,

⁷¹ Rivers in northeast China.

⁷² A major city in the northeast.

'*Douzi* [beans] are growing well this year.' I asked them about the floods. They said that water from the floods stayed in the troughs of the fields, while *douzi* and corn grew on ridges. They taught me the folk idiom, 'Floods move in thin lines, but draughts arrive in big batches (水來一條線, 旱來一大片).' The effect of floods on soybean was limited."

The use of fundamentals was impeded by a low level of trust in statistical figures in China. There were cases of government bureaus at various levels tampering with statistics, with motivations in tax evasion, financial subsidies, competing with neighbouring bureaus, or gaining political favours (See Didier 2007 for issues of performativity in agricultural statistics.) For example in Santai village (三台村), Maiwang town (脉旺鎮), Hubei province, in 2004 the village council had inflated the annual income of the village's private sector enterprises from RMB 80 million to RMB 1.009 billion in 2004. As the newspaper investigative report shows, the 92% fabrication could be dated back to the 1980s. Despite a gradual decline in the town's local economy, Maiwang town occupied an important position in the local political hierarchy. The town council officials needed positive figures to maintain political favours; reporting the truth would give a seemingly abrupt drop in economic figures, and a big minus on one's political career profile (Zhu H.-j. and Rao 2005).

The dramatic case is only the tip of the iceberg for China's economic statistics. On the futures training course in City P, a soybean analyst describes how difficult it is to get a realistic picture of the fundamentals out of official figures. After a tax cut carried out by the state to provide subsidies to soybean farmers in 2003, the official area of soybean farmland suddenly leapfrogged to a +40% increase from 2003 to 2004. In the same year, the official figure of "wasteland" (五荒地, *wuhuangdi*) suddenly decreased by -89%. Seemingly previous figures had been seriously distorted for the sake of tax evasion. He also tells a story how he had tried to obtain more realistic estimates from a soybean farm, using extraordinary means:

"The person in charge told me that they had 40 thousand acres of soybean farmland, as reported to bureaus above.⁷³ Then we started drinking *baijiu* [a strong alcohol, 40-60% mool]. After the second glass, the figure jumped to 80 thousand acres. Third glass, 150 thousand. I didn't know how many glasses we had. When both of us were throwing up, he said, 'hey you're a good brother. I'll let you know, hic, it's 220 thousand.' We kept drinking until we were lying on the road outside my hotel. He told me the figure was 320 thousand acres... Other crops were planted on the rims of their fields as a decoy, but the real crops in most of the fields were soybean. The last sentence I remembered before a black-out was, 'Sometimes corn is difficult to sell, but you can always sell your soybean. We plant soybean like cash.'"

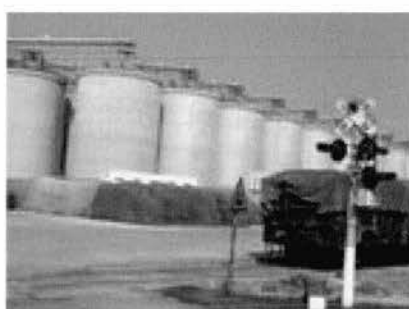


Figure 7.6: A state reserve granary (photo taken during one of the training class visit sessions to a designated delivery warehouse of Exchange P)

Political decisions are involved in what kind of data is publicly available. The China Foods and Oils Information Centre (中國國家糧油信息中心) is a national statistics unit that compiles various "composite livestock indices" (e.g. live pigs, live cattle etc.) on a regular basis, and disseminate the indices as price references throughout the country. However, the state withholds state reserve inventory figures (*kucun* 庫存) for grains, posing extra challenges to fundamentals analysis. Experienced analysts do make estimates of the state reserve inventory based on the public figures of

⁷³ Many large soybean farms in northeast China had a quasi-military background. In the 1950-60s, wasteland in the area was cultivated by stationed troops as a defence buffer area against the then Soviet Union. Many such farms were located in the area known as Beidahuang (北大荒), an area where political dissidents were sent to labour on the farms during the Cultural Revolution.

production, imports, exports, and consumptions. Yet figures like losses through mould (*meibian* 霉變) are never made public. Therefore after accumulated years, there may be a wide margin of error carried over in the estimated figures of analysts. In an interview, an analyst says that with the memory of famines in 1959-60, it is understandable why a populous country like China still treats grain inventory in state reserves (Fig 7.6) as strategic state secrets in the 2000s. Yet he thinks that by making fewer data publicly available, China is not exerting its full potential to influence global grain prices, and domestic prices are more vulnerable to fluctuations from abroad.

In 2005 in China's commodity futures markets, people were highly sensitive to political news and their implications for investment. People talk about politics all the time – what are the state leaders talking about in the National People's Congress this year? Would the government intervene with the overheated property markets? Would *Fagaiwei* (the National Development and Reform Commission, 發改委) launch a new round of price control measures? Which futures exchange is getting better political favours from the central regulatory bodies and has a chance to launch novel products? When would China's futures industry be open to foreign investment? People read political news, talk about politics, and make trading decisions based on politics all the time. Yet “political analysis” appears to be something spontaneous and informal to my field subjects. Nobody in the industry would actually list “political analysis” as a separate session in a futures training workshop alongside fundamental analysis and technical analysis. Nor is it listed as a separate item in the professional qualification examinations. Yet their political sensitivity appears to be so spontaneous that they are immersed in it, like fish swimming in water. A number of field subjects tell me that they take political analysis as part of fundamental analysis, and the two cannot be easily separated.

Perhaps in China, it is difficult to have a clear-cut boundary between politics and the states of supply and demand. The two are closely intermingled and influenced by each other, such that politics *is* an integral part of the state of economic reality. A broker once told me, “Politics is just like futures. Long or short, you'd

gotta get the direction right. Things will go against you if you get in the reverse direction (方向搞反了).” Most field subjects can tell a number of stories about policy risks in the futures markets. From operating a brokerage firm to running a private fund, sometimes it is wise to invite some government bureaus or para-governmental enterprises to become minority shareholder(s), so as to get information, support, and protection from the official side. However, getting the support of one governmental body may not guarantee safety, because political risks can come from the national, provincial, municipal, or industry level. Once a broker showed me around the city of Tianjin, where in the middle of busiest district, I saw a 50-floor skyscraper standing there, half-built but abandoned. (Fig 7.7) “Look, this is the



Fig 7.7 The abandoned construction site of the former Tianjin Commodity Exchange

infamous *lanweilou* (爛尾樓, abandoned construction project) of the futures industry.” According to the broker, the late Tianjin Commodity Exchange was got the support of the municipal government. It used to have around 100 members, and by 1998 each member had put in around 100,000 renminbi into the building project. Then the CSRC suddenly announced that the whole Tianjin Commodity Exchange,

together with ten futures exchanges in other provinces, were to be abolished. Members abruptly withdrew their seats, the price of Tianjin red bean futures plummeted, and there was no further money to continue the construction project. The building was just left here, half-way done, for seven years to rust.

Sometime the same policy news can lead to opposite interpretations (see also Abolafia 2005). Between May 2001 and January 2002, the Chinese government announced a series of new policies concerning genetically modified organisms (GMOs). In March 2002, the Dalian Commodity Exchange changed the contract specifications for “soybean 1”: delivery can only be made with domestic, genetically unmodified soybean; it cannot be substituted by imported, genetically modified products. The longs thought that since the use of imported soybean would be limited, prices of domestic non-GMO products should rise. Conversely, the shorts thought that past reference prices should still hold, because the food and livestock industry would still heavily rely on imported GMO soybeans, and prices were likely to be overheated by the longs. The two sides got engaged into a heated struggle, and the number of outstanding contracts rose steadily in 2002. In May 2001 to August 2001 the longs were on the winning side, pushing prices from 1900 to 2100 renminbi per tonne. From August 2001 to January 2002 the shorts were having a better say, and prices slid back to 1900. Throughout 2002 prices rose all the way up to 2700 around December, until most of the shorts surrendered and cancelled out their positions. Some online futures blog entries (for example, www.cnfol.com) mention about the activities of gang-like factions on both sides as the main reason behind price movements. However, news on GMO policies served as the major trigger that attracted the attention of both sides on soybean futures at the first instance (21CN 2004).

Due to the limitations in what kinds of fundamental data are availability, and a general scepticism towards those fundamental figures available (statistics, *kucun*), fundamentals analysts are aware of the possible gap between reality (statutes of supply and demand), and the representation form of knowledge (statistics and prices). Fundamental analysis emphasizes that signs (prices) and representations (statistics

and figures) should be ultimately grounded upon the real world (material, political and social) situation of supply and demand. Yet when analysts have limited access to trustworthy supply and demand statistics, political analysis and technical analysis become more practical tools for traders and analysts.

7.5 *Chartism*

Chartism, or technical analysis, is the analytical tool most widely adopted by my field subjects in 2005. With price levels (y-axis) plotted against time (x-axis), the chart is a visual representation of prices, volume, momentum and historical data, condensed in an easy-to-comprehend and intuitive glance. While the validity of using charts for prediction is controversial, field observations show that charts have an extra basic purpose to fulfil: as a medium for the market participants to “know” the market, and as a common visual vocabulary to communicate (see Preda 2007).

The candlestick chart is the most popular type of chart used in China’s markets. It originated from Japanese rice futures traders in Osaka in the 17th century. Within each time interval (a “candlestick”), the high and low are plotted by two thin vertical lines protruding up and down, while a bulk rectangular box in the middle marks the opening and closing price. Candlesticks that close higher than the open are coloured red, and those that close lower are marked green. The information illustrated by a candlestick chart is identical to that of a bar chart. However, a candlestick gives more visual emphasis to the open and close (by the bulk volume in the middle), and to the direction of price movement (by the colour scheme).

7.5.1 Communication

The following is a dialogue between ten staff members of Exchange Q, and a global futures brokerage firm executive who visited the exchange. Although all of them were professional practitioners in the futures industry, the use of different epistemic tools led to surprisingly wide gaps of communication.

Exchange official: What kind of charts (圖, *Tu*) do you read?

Overseas executive: We don't read charts... We calculate. We have mathematical models programmed on our systems, and we use them to calculate if a derivative is a bargain or not. When we find a bargain, we trade.

His words were met with stunned faces. Most of the representatives from Exchange Q are accustomed to comprehend the markets by candlestick charts. They are prepared to learn about new forms of charts, but market movements without charts seem incomprehensible. Conversely from the overseas executive's experience in global financial derivatives, mathematical models similar to the Black-Scholes model are widely employed on a day-to-day basis. "Calculation" is grounded on the assumption that there is a theoretical intrinsic value. When there is a wide gap between this theoretical intrinsic value and the empirical price, a "bargain" can be identified. Such bargains may be revealed as colours and blinks on the user interface, but graphical charts are not necessary. On the meeting, the "chart people" and the "calculation people" seemed to have difficulties understanding each other.

Similarly on another seminar about programmed trading (held by my brokerage company during the Beijing internship), a speaker with over ten years' experience in programmed trading on Wall Street introduced how computer programs could be set up to execute parallel, automatic trading "agents" on hundreds of contracts. A question from the audience shows how the understanding of some chartists can be framed by their epistemic tools.

Q [from chartist]: I don't understand trading without charts. Can you show us the chart? When you were demonstrating the eight simultaneous trading windows just a moment ago, oh tell me, what is actually happening on the charts?

A [programmed trading specialist]: The chart is for human perception only... When it's automatic, the program will estimate the risks, conduct analysis, and launch trading instructions automatically. The program is an extension of the strategy in your brain. We don't need the charts.

7.5.2 Diffusion

Technical analysis is largely diffused across the futures community through trading software companies and futures brokerage firms. Both provide tools and information for technical analysis and fundamental analysis to their clients as value-added packages. Take the example of the software Webstock. By offering a customizable graphical interface and bundling dozens of “technical indicators” (such as moving average, MACD, RSI, waterfall etc.) into the software package, the software company can expand its user base, retain existing clients, and build a continuous product upgrade pathway. Brokerage firms help to disseminate the chartist’s tools and techniques from professionals and amateurs by offering analyst reports, online advice and seminars.

When futures were introduced to China in the early 1990s, technical analysis quickly followed. In the early days only a limited number of foreign reference books were translated into Chinese, and the choices available to industry practitioners were very limited. An influential one is *Technical Analysis of the Futures Markets – a Comprehensive Guide to Trading Methods and Applications* by John Murphy. It has successfully diffused across the industry. The book appears on most futures training workshops, and analysts told me that to understand futures I must have my own copy of it.

John Murphy was the director of futures technical research with Merrill Lynch, and a former technical analyst for CNBC-TV. The English version of the book was first published in 1986, and according to a preface he wrote in a later version (*Technical Analysis of the Financial Markets*, 1999: xxvii-xxix), he claims that the book “has been referred to by many in the field as the ‘Bible’ of technical analysis”, is used by the Market Technicians Association as a primary source in their testing process for the Chartered Market Technician program, cited by the Federal Reserve (US), and translated into eight languages. The Chinese version was translated by Shengyuan Ding (丁聖元) and first published by Earthquake Publishing, Beijing in 1994. The copy I bought in 2005 was already its 11th print.

Earthquake Publishing is the publishing arm of the state seismology bureau, China Earthquake Administration (中國地震局). As China proceeds along economic reforms, the publisher has broadened its book catalogue from seismology and applied science to more popular titles in investment and business management, including a number of “classics” in technical analysis. These books are widely used by industry practitioners, but among China’s academics of finance and economics they never get higher regards than mere folk knowledge. When I showed John Murphy’s book to a finance academic in Beijing from a prestigious research institute, he shrugged his shoulders, “Earthquake? Don’t waste your time on it.”

The official study guidebook for China’s National Futures practitioner qualifications examinations (China Futures Association 2007) attempts to strike a careful position on chartism. In the “fundamental futures knowledge” study guidebook, 41 out of 597 pages are dedicated to various techniques in technical analysis. The most popular techniques employed by the industry in China are incorporated: Elliot wave theory (three pages, see also Murphy 1999:Chapter 13), cycle theory (one page), and Gann’s theory (three pages) – which sometimes carries a bad name like “financial astrology” (see below). Nine other pages cover a harsh critique on chartism from an academic point of view. By incorporating the viewpoints from both camps, the official qualification exam authority appears to recognize both the orthodox knowledge claims from academia, as well as the current pragmatic practice of the industry.

7.5.3 Gann’s theory: Magic and Mystery?

Amongst various schools of chartism, the branch called Gann’s theory by William D. Gann (1878-1955, New York trader since 1908) is sometimes taught with an air of mystery, and an aura of cosmic awe. For example on the “Sacred Science Institute” internet website, Gann’s theories are classified under “cosmo-economics” (<http://www.sacredscience.com/gann/>, accessed 18 Aug 2007), and the website’s front page carries the subtitle “a mystical magical cosmological portal”. On the English Wikipedia online dictionary’s entry “financial astrology” (defined as “the

practice of relating/correlating the movements of celestial bodies to events in financial markets”), William Gann is listed as a “financial astrologer of note” (as accessed Aug 2007).

The cycle theory of William Gann became popular in China from the mid 1990s on. Representative published titles include *Gann's Theories* 《江恩理論》 in 1995 by Bozhong Huang (黃柏中) (also published by Earthquake), *Uncovering the Secrets of Gann's Predictions – an analysis of China's stock market cycles* 《江恩測市揭秘 – 中國股市循環周期解析》 in 2001 by Ming Feng (明楓), and others. Some Gann chartists in China also run workshops charging for expensive training fees since the mid 1990s.

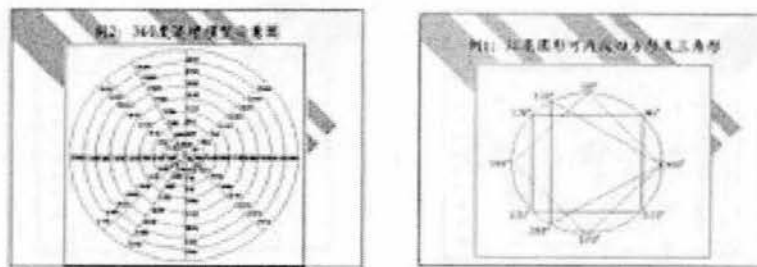


Fig 7.8 Gann's cycle theory: (Left) the special numbers are chosen from a spiral path in concentric circles. (Right) Graphical illustration of why the numbers 45, 90, 120, 135 etc. are chosen as turning points

According to Gann's cycle theory, the price and time dimensions of the market can be mapped into a circle. Divide 360 degrees of a circle by 3, 4 and 8 to obtain the “magic numbers”: 120, 240 and 360 (divisions by three); 90, 180, 270 and 360 (divisions by four); 45, 90, 135, 180, 225, 270, 315 and 360 (divisions by eight). Unfold the circle into a linear scale. By choosing a starting point and an interval width, the unfolded circle can be mapped along both time and price axes on the market chart. The school of Gann believes that when market activities on the chart come across the “magic numbers”, the market is likely to be at its peak or trough (i.e., trend reversal point). Especially when both time and the price run into magic

numbers, “resonance” between time and price will occur, and there is likely to be an acute trend reversal (seminar notes from Ming Feng, 2005; Fig. 7.8).

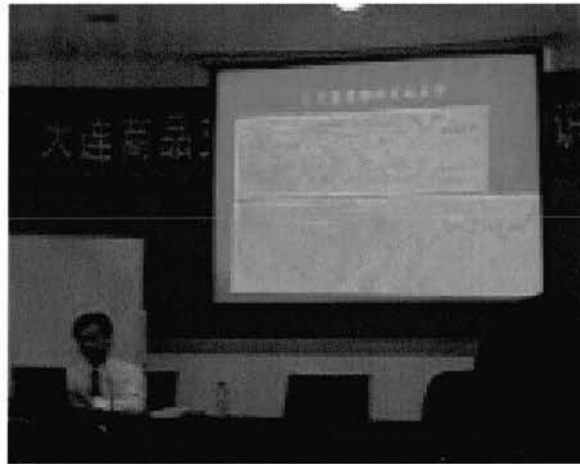


Fig 7.9 Training session conducted by Ming Feng on chartism and Gann's theory, July 2005, City P

In my five-day training course in city P, the organisers invited Ming Feng from Shenzhen, from where he took a four-hour flight to reach City P to give a full day's talk on the cycle theory of Gann. During the whole day, Ming Feng showed us 54 charts on powerpoints, illustrating graphical examples of such cycles on various market products (Fig 7.9). The time span of examples he takes ranges from two months to 35 years. To illustrate the validity of cycles, time segments with the duration of a “magic number” are marked on the charts, with peaks and troughs of prices highlighted by colour circles. The charts include prices of the Shenzhen equity index, Shanghai equity index, London copper, the GDP of China, US dollar exchange rate, Japanese natural rubber, Hong Kong's Hang Seng index (an equity index), the CRB index (from the Commodity Research Bureau in the US), the Nikkei index, Zhengzhou wheat futures, Shanghai copper futures, Dalian soybean, Shanghai natural rubber, US soybean, and US cotton.

The number 180 means that, market trends tend to pause every half year. 90, 180 and 360 are also likely reversal points. How do we decide which one is a trustworthy pattern? First we have to find a starting point on the timeline, and decide what the

interval is. Then we can make predictions... beware sometimes a peak may be confused with a trough.

Some Gann chartists would justify the theory by loosely relating it to natural phenomena, such as seasonal, tidal and astronomical cycles as parallel patterns of “cosmic order”, or the “golden ratio” in the structures of sea shells. Ming Feng had a rather reflective outlook. He was less inclined to explain things simply by drawing parallels with cosmic causes; he admitted that the logical validity of Gann’s cycle theory remains unclear, and the choice of starting points and intervals in the cycle theory can only be verified by hindsight.

What does this circle actually mean? Gann’s theories carry a weakness that, these things are never made clear. You cannot explain why we have a circular diagram... but after we get the circular diagram, we can verify it by empirical evidence on the markets.

On that evening some classmates talked about the class, and the reactions were mixed. Some classmates were skeptical that Gann’s theory is complete voodoo. Others withheld the theory in awe and wonder, being amazed at the accuracy of cycle times on the powerpoint charts. Some others found parallel traits between Gann’s theories and Chinese classics in cosmology, philosophy and mathematics, such as *I-Ching* (易經), and they believe that Gann’s theory “has some significance”. For those who believed in Gann’s theory, they could not explain actually why the cycles occur, yet they nearly all held an attitude of humble divination.

7.5.4 Template for Action

Besides representation, communication and diffusion of knowledge, chartism can also serve as a ‘template for action’ (Bray 2007:73). A chartist in Beijing told me that when China first started to have futures markets in the early 1990s, most people used to rely on an earlier software system called Shihua (世華). It was an interface built upon the DOS platform. People had to remember short-cut keys, in contrast to the point-and-click, mouse-based windows platform of the later Webstock (文華財

經) system. Candlestick charts were not available then, and to some extent traders' actions were framed by the charts available to them. The amount of detail in the charts and how they are augmented provide some cues to the actions that may be taken next.

[On the Shihua system] We could only see one simple line out there. We long when it rises; we short when it falls! Now the tools are much better, and we can devise more sophisticated analysis based on patterns of the candlesticks.

He showed me how to use the candlestick charts. Switching quickly from 1-minute, 3-minute, 5-minute, 10-minute, 1-hour, 1-day, 1-week and 1-month candlestick charts, one gets a “three-dimensional perception” from short-term to long-term scale about the market movements. He suggested that the exercise is helpful for developing *pangan* (盤感), which means intuitive feelings about market directions. He demonstrated to me how to draw support and resistance lines, so as to set up stop-loss limits and trading strategies. These actions were made possible with candlestick charts, but not on the early version of Shihua systems where traders could only see a simple price line. The graphical representations available to traders turn out to influence how they think and act. This is consistent with Bray (2007:73) on *tu* (圖 image) in the context of technical images in the history of China: *tu* is an encoding of knowledge that serves as a template for action.

Like other typical chartists, my field subject believed that “the chart incorporates all the vital information from the market.” He gave me the impression that he was really fond of using the candlestick chart, and he relied on it heavily in his trading operations. However on further discussion, he indicated that his choice was mainly utilitarian. He felt no particular ideological conviction or emotional attachment to chartism. He may readily be converted or “reconfigured” to other forms of knowledge tools, if better investment returns seem more likely.

Siu: In the future if everybody in the market switch to another tool, will you still stick to candlestick charts?

Chartist: Whatsoever tool helps me to earn money, I'll use it! If we have a better tool one day, I'll switch.

7.6 *Frames and Consensus*

This chapter is a record of the subtle fabrics of the futures markets: how knowledge is encoded and diffused across the market. In the risky and uncertain life of futures traders, market participants are seeking for a “meaningful totality” to make sense of the market world. What kind of roles and identities do they have? How to comprehend and react to the market? How to devise winning trading strategies?

From field observations, we can identify traits of roles similar to what Weber (1968:439-451) describes as “priests and prophets” in a religious society. The staff members of brokerage firms, trading software companies and futures exchanges are intermediaries quite similar to priests. They occupy formal office positions in the market hierarchy. It is their vocation to take an active role to diffuse knowledge and values in futures trading to different geographical areas and social strata. They seek to expand the boundaries of the futures markets, so as to sustain fluidity in market operations. They provide rules, procedures, public meetings and communication channels for traders to participate in the market community. Through classroom activities and media contents, grass-root traders acquire vocabulary, skills and identities (such as “futures people”, “hedgers”, or *caopanshou*) for futures trading.

On the other hand, analysts serve as an intermediary between the investor and the revelation of uncertain and risky events. Some practices of the market analyst are comparable to that of the prophet – that is, to predict future events and to provide guidelines for appropriate actions. These practices demonstrate how framing tools (Beunza and Stark 2004), such as chartism and fundamentals, can be used to derive appropriate action plans. In the case of Gann’s theories, some of the framing models carry conspicuous elements of mystic magic, which – in apparent paradox – tightly fits into a futures community that relies heavily on computers, precision and numbers. Grass-root traders also look up to a few top traders (such as Zhang Wenjun, Guan

Jinsheng and Leo Melamed) as morale icons, authority figures and role models. Common traders tend to follow their trading advice, as well as look up to them as examples of values and good trading practices. These authorities show traits of exemplary prophets as discussed by Weber (1968:447-450).

Besides the priests and the prophets, the role of non-human objects as market intermediaries should not be overlooked. As shown by the migration from simple line charts on the Shihua system to candlestick charts on the Webstock system, charts (and other forms of knowledge encoding) do shape the traders' understanding of the market world, and influences their trading actions. The priests, the prophets, and the non-human intermediary artefacts are crucial fabrics of the markets. Without these intermediaries of perception, knowledge and communication, it is unlikely that trading activities can easily arise "spontaneously" from potential supply and demand.

Chapter 8 Technology-linked Gender Shift

8.1 Women on the Trading Floor



Fig 8.1a, 8.1b, 8.1c, 8.1d: Female red jackets working at Exchange P

In Exchange P, the trading floor had 288 physical seats arranged along nine rows of semi-circular benches. There one can see the trading floor representatives, striking their terminal keyboards, talking over the phone, browsing technical charts and reading newspapers. Floor representatives are also known as “red jackets” (*hongmajia* 紅馬甲), because they had to wear red jackets showing the trading seat numbers on their backs. With the help of some field subjects, I was able to join the “Thousand Villages, Ten-thousand Doors” training classes to visit the trading floor several times. Visitors were allowed to walk through a semi-circular corridor on the outer rim of the back of the trading floor and take pictures. As the trading floor was separated from the visitor corridor by a glass wall, to the visitor’s eyes the trading

floor slightly resembles an exhibition glass bowl. Peering through the glass wall, the trading floor was relatively quiet as compared to the tense, masculine, fast-moving and noisy manual trading pits of Chicago described by other researchers (such as Greising and Morse 1991, MacKenzie and Millo 2003, and Zaloom 2006), or the New York Stock Exchange (NYSE) trading floor as I witnessed in 2000 as a tourist. This is understandable, as markets that mainly trade by electronic channels do not rely heavily on traders' physical movement and body language, and Exchange P is a young and specialized market which should not be compared with the NYSE. Yet Exchange P's trading floor had one striking feature: about 90% of the red jackets working there were female.

Later with the help of field subjects, I got to know a group of female red jackets working on Exchange P's trading floor and joined them for lunch and discussion for several times. According to what they told me, eight years ago they used to have a male to female ratio around 6:4. In less than a decade, the ratio gradually shifted to 1:9. The gender shift was so significant that earlier in 2005, the exchange had to renovate some of the male lavatories into female ones to accommodate for the actual needs of the red jackets. Likewise in summer 2005, I also found out from red jackets of Exchange Q that they had experienced a similar gender shift, with male to female ratio changed from 7:3 to 3:7 around the same period of time. All the red jackets I talked to were well aware that a gender shift had been going on.

One veteran red jacket attributed the gender shift to technological changes in broadband internet and online trading. Back in the 1990s trading orders were mainly placed by making phone calls. All or most of the trading orders were placed through red jackets on the trading floor. At that earlier time, the red jackets held themselves and their work in a high esteem. They enjoyed the excitement of the busy trading floor, and their pay was better.

Veteran female red jacket: 8 years ago working as a *majia* (jacket) was a much better job. The clients had to trade through you, and I got so many phone calls. I used to put on a headphone connected to two phones, sometimes

with a third mobile phone under my chin. My ten fingers were always tapping on the keyboard, making thousands of taps every day. I spoke concisely, "*Sud*" (speak), "*dou*" (bean), "*tong* (copper), how much". I never said "*nihao*" (hello). *Nihao*? After saying *nihao* the prices will roll two further ticks down!

Back in the 1990s, member firms with high trading volumes used to set up additional floor seats (for a small fee to the exchange), and station a number of red jackets on the floor to take in simultaneous trading orders. Traders used to befriend their favourite red jackets to ensure a high priority in order placing; additional tips, such as feedback about trading floor atmosphere or rumours circulating on the floor, were treasured by traders and brokers alike. In the 1990s when corner events occurred more frequently, red jackets on the floor were an integral part of the "battle team" – the gang-like capital factions (see chapter 6) – to exercise effective trading plans. A few red jackets said that, the most fulfilling part of their jobs in the 1990s that gave them most of their job satisfaction was, as one put it, "to execute the client's trading plan successfully", exerting significant influences on the markets through the orders they placed.

In city P when a primarily female group of red jackets were having lunch in a relaxed and friendly "sisterhood" atmosphere, they talked about what was deemed as the skills of a good red jacket: fast keyboard fingering, multi-tasked mediation, and keen observation. Four red jackets in city P told me in unison that they do derive physical pleasures and self assertion from "feminine", proficient fingering skills.

Siu: What is the most fulfilling part of your job?

Female red jacket S: To know that I am fast and accurate, sending those orders in, one by one, launched on the market, exerting important influences. That's exciting.

[While S spoke, she moved her right hand fingers as if she was stroking round and round on some invisible string instruments. All the four red jackets in the group picked up the same action in silence, moving their fast and dexterous fingers. They looked at each other, smiled with a shared sisterhood and understanding.]

One red jacket told me about her sisterhood network of trust on the trading floor in the 1990s. When her trading seat reaches the trading limit, sometimes she would place some of the overflowing orders through “good friends on the other end of the trading floor”. She would exchange valuable market information with trusted friends.

Sometimes you befriend other red jackets sitting next to you. Sometimes your best friends may be sitting on another bench quite far away, like me and XXX. But it doesn't matter; even if she's located at the other end of the trading floor, a friend is still a friend. You exchange information and help each other. On weekends we do face masks together. After 911 we were betting on the upcoming market trends, and it turned out that we were both wrong, hahaha. We are good friends.

In ethnographic accounts of Zaloom (2006) or Abolafia (1996), physical prowess, “playing tough” or daring to take risks are “masculine” versions of trading skills and qualities commonly recognized in the markets. The case of red jackets in Exchange P shows that in the rare case of a primarily female market environment, skills and qualities attributed as feminine (such as dexterous fingers, keen observation, and sisterhood networks of trust) surface as positive assets within this female market segment. The female practitioners have some ways of asserting themselves that are different from their male counterparts.

Various market segments require a combination of multiple skills. Nonetheless, in the presence of both genders in the overall market, skill types attributed as feminine such as dexterous fingering or telephone skills are dismissed as “handy work”. They are often assigned to supportive roles with lower pay and occupational status. When employers and employees made decisions about internal transfer and recruitment, gender filters came into play in a language of competency (see also Levin 2001), dedication and character traits. Qualities like risk-taking, resilience, and calmness in the face of huge losses were attributed to masculinity, as agreed by both male and female field subjects at different levels. A few female traders and red jackets believed that males are really better than females in trading, because they are more “resilient”, more “daring”, or more “aggressive”. There were circulating market legends about how male star traders lost astronomical sums in

their positions, kept calm, stopped loss and turned their losses into gains. Such manifestations of masculinity were rewarded by high status and salary.

8.2 Types of Trading Seats

One wing on the third floor was partitioned into small rooms for member organizations, serving as trading and meeting rooms for traders/clients, as well as a resting place for red jackets. The rest of the third and fourth floors were office space for the exchange staff responsible for administration, trading operation, settlement, marketing, research and information technology.

In 2006 Exchange P had 180 brokerage members and 14 self-trading members. The former were licensed brokerage companies, who could only place orders on behalf of their clients; the latter were companies related to soy products, and they could only trade for their own accounts.⁷⁴ Each member firm was assigned a unique “trading seat number” (交易席位, *jiaoyi xiwei*), which was an authorized identity to trade at the exchange.

⁷⁴ The capital requirement was RMB 30 million (£2 million) for Exchange P's brokerage memberships, and RMB 5 million (£333,000) for self-trading memberships. The 2 categories of Exchange P memberships were relatively simple, compared with 7 categories of memberships at the London Metal Exchange (LME): ring dealing, associate broker clearing, associate trader clearing, associate broker, associate trader, individual, and honorary. Each LME category had different rights in terms of floor/electronic markets, clearing, and brokerage. In 2006 the futures industry of China had extensive discussions on whether more tiers of exchange memberships should be established in terms of dealing and clearing, yet no action was taken by early 2007.



Fig 8.2: Electronic screens and gong on Exchange P's trading floor

There were 5 types of trading seats at Exchange P: primary floor seats, additional floor seats, ordinary remote seats, remote seats within the exchange building, and remote seats in additional trading halls. The traditional version of a trading seat was a “floor seat” (場內席位, *changnei xiwei*). It was one of the 288 seats aligned along rows of arc-shaped benches in a round trading hall of 2,000 square meters on the 1/F trading floor (Fig 8.1d). In the middle of the circular structure, two huge electronic screens showed real-time quotes of various futures contracts, and a gong was occasionally struck when special guests visited the trading floor (Fig 8.2). Each floor seat was equipped with computer screens and phones (Fig 8.1c). A member firm would appoint and station a floor representative there to execute trading orders from clients and/or traders. The orders were placed via a standardized computer interface provided by Exchange P; the floor representatives were responsible only for executing trading instructions from their clients and traders, not negotiating with

their trading counterparts or making major trading decisions.⁷⁵ Occasionally some red jackets dealt with other tasks, like handling procedures of physical delivery⁷⁶ between their clients and the exchange.

Trading seats could be “remote seats” (遠程席位, *yuancheng xiwei*). By trading through remote seats, traders and clients could directly place their orders from their own computer screens across the country. The orders went through the member firms’ gateways and servers, and reached the exchange’s order matching system to be executed. A member firm still exercised control by monitoring the aggregate margins and exposed risks of all the accounts under the umbrella of its “trading seat”, taking floor and remote activities into overall consideration. Actions like margin calls and clearing were handled at the member firm’s risk controller and finance offices, bypassing the trading floor and the physical “floor seat” of the red jackets altogether.

A third type of trading seats was “remote seats within the exchange building” (所內遠程席位, *suonei yuancheng xiwei*). These were computer terminals located in 3/F east wing, where some member firms had rented office space along two arc-shaped corridors. The computers were equipped with a standardized software interface provided by the exchange, with stamped seals forbidding the member firms to tamper with the software. Here brokerage managers and power traders could exercise direct control of their trading seats without stepping into the trading floor – a place with much less privacy and lower status, which was increasingly being turned into a service-based call centre.

⁷⁵ Their roles were much less important than floor dealers or specialists in markets like the CBOT.

⁷⁶ Physical delivery: traders who held open futures contracts on the contract’s expiry date had to provide (for short positions) or accept (for long positions) a qualified amount of the qualified commodity, at one of the designated delivery warehouses. Physicals of Exchange P were things like tonnes of grain A, bushels of grain B, or tonnes of grain product C.

With the onset of upgraded electronic trading platforms and broadband internet in the early 2000s, more clients chose to place trading orders directly from their personal computers from home or office instead. Each order still bore the “trading seat number” of the associated brokerage firm or self-trading firm registered at the exchange. Yet the agency role of the human red jacket has been largely taken over by software interface and broadband networks. More and more of the transaction orders come in through the remote seats.

8.3 Technology Shift

The shift in gender ratio on Exchange P’s trading floor is part of a bigger paradigm shift. Technological change and the reduced costs of broadband internet led to a new model of brokerage and mediation. Eventually it brought significant occupational changes to the trading floor that integrates with a significant shift in gender ratio.

The changes started from the technical trading interface and costs. Back in the 1990s, one terminal that provided real-time trading, quotes and charts for futures in China cost about RMB 10,000-20,000 (around £667-1,335).⁷⁷ Such terminals were out of the affordable range for most retail futures traders. Instead of setting up their own trading systems at home or in the office, retail traders went to brokerage firms to use the terminals. They colloquially called this “to see the charts” – showing that these investors heavily rely on chartism. The brokerage firms often provide terminals in open areas for the clients in general. Additional closed rooms equipped with terminals called “big player rooms” (*dahu shi* 大戶室) were provided for VIP clients.

⁷⁷ The cost refers to using one of the two domestic software systems, at first running on DOS systems and using satellite links. Foreign software systems like Reuters contained more comprehensive information, but they were more expensive. Those were more often used by banks or stock traders, but due to costs and user habits, they were rarely used by the typical China futures trader.

A marketing manager of the futures trading software company, Webstock Ltd. (文華財經), described the futures brokerage industry before 2001:

In the past, brokerage firms used to encircle their clients in designated trading rooms to “watch the markets”. Customer service meant the provision of lunch, tea and refreshment for the clients... That kind of work was called “working on the clients” (*zuokehu* 做客戶).

Not only lunch and refreshment, but sometimes cigarettes, karaoke and even accommodation were provided. The close client-broker interactions helped to create an enclosed living space that consisted of “futures people”: they talked about market news, they shared the excitement and fear, and their attention was fixated on the markets. Brokers were not only the intermediary channels of trading, but also an environment of analysis, information input, morale and personal support while the clients were taking risks.

I visited one informal accommodation quarters of a brokerage firm during fieldwork. The apartment used to be the company’s office more than ten years ago. The place was flexibly used to accommodate staff members and clients. In the past, clients from far-away towns used to stay in these quarters for a few months while they performed intense futures trading. There used to be a high turnover of client residents living there – as those who lost all their money, as well as those who gained substantial sums from the markets, would move out from the apartment. I was told that at peak times there were more than eight clients occupying three rooms and one lounge. Residential conditions were less than ideal, as around 40 obsolete computer consoles and rows of dusty file cabinets were piled at the corner of some rooms, and some of the beds were broken. By 2005 it was rather unlikely to have clients living in these quarters for months. But I could still see around ten sets of personal bedding left behind by former occupants.

2001-02 was a critical period when futures traders in China switched from a system centered around telephones and brokerage offices to electronic online trading. Before 2001 Webstock used to have around 50,000 subscribers using individual

terminals connected by satellite links. The company saw the opportunity in the growth of broadband internet.⁷⁸ Instead of selling their packages to individual traders and investors, they started to target the 130-140 futures brokerage firms who were active in the markets instead. These companies in turn gave away the software to their own clients for free. This move proved to be a great success for Webstock. As most of the futures brokerage firms were in keen competition with each other, any move that helped to attract clients (like giving away seemingly free software) was quickly known within the industry, and quickly imitated by others. In a short time 120 out of the 140 active brokerage firms became customers of Webstock, making their software the mainstream platform for futures trading in China. It was understood that by selling collective licenses to brokerage firms instead of individual investors, issues like software piracy and technical support could be better dealt with on a business-to-business basis, and Webstock managed to get a more stable stream of income. Targeting the brokerage firms helped them to extend their client base effectively amongst the futures investor community. The move meant that it is less likely for the clients to go to their futures company to “see the charts”, or call up brokers and red jackets to place orders by phone. They can place orders directly from terminals at home or in office across the country via broadband internet. Trading orders still have to bear the seat number of a member organization, but many clients may bypass the human contact with brokers and red jackets altogether. In 2005 a brokerage firm manager showed me their two VIP trading rooms, “These are our *dahu shis* (VIP trading rooms), but nowadays the VIP clients no longer trade here.”

The marketing manager of Webstock thought that the futures brokerage industry was undergoing a transition to more “professional” practices.

⁷⁸ In 2005 in Beijing, the month subscription fee for a residential broadband internet connection was RMB 216 (£14.4) per month.

Now with the internet, the clients were directly trading from their homes and offices... brokers were more often expected to provide advice, guidance and chats through online channels.

Advice and guidance are becoming more important than the provision of physical space and refreshment. Now clients are more likely to focus on investment advice, analysis, and financial performance. Webstock has bundled an instant messenger interface called Wenwentong (文文通) with its online quotes and chart system as a popup box on the side. The interface facilitates futures brokerage firms to organize their online customer support around user groups, staff teams and broadcast lists. Once a client logs on to Webstock through the brokerage firm's server to access the online quotes, she can access the brokerage firm's online advisers and notifications.

Simultaneous changes occurred in the qualifications of the staff of futures firms. The China Futures Association was founded in December 2000, and started to organize training courses to upgrade the level of professional knowledge in the industry. In 2002-2003, the CSRC announced several policy papers to monitor the qualifications of senior staff members and staff members of futures companies. Full-time industry practitioners had to pass two examinations, one for basic knowledge in futures and one for legal knowledge, to continue working in registered futures companies. While in the 1990s a lot of veteran soldiers, farmers and housewives could enter the industry, in the 2000s nearly all the fresh entrants had to be at least university graduates. The existing practitioners had to take make-up classes to pass the two professional exams. The upward move in academic background is mainly associated with the policy requirements for professional qualifications, but also associated with the change in mediation patterns triggered by technology.

Brokering still demands a combination of people skills and financial skills. Once I heard a manager giving an instruction session to his staff:

To acquire clients and to retain them, you need to form cooperating teams. For example you can analyze copper, but you can't drink. If you have a client who trades copper and who loves drinking, you'd better get help from a colleague who

can drink, and go to see the client together. When we combine different skills, we work better as a winning team.

Nonetheless, old timers with over ten years' experience without a university degree find that it is more difficult to get into big brokerage companies in the mid 2000s. Apart from intuition, instincts and bravery to take risks, the industry is increasingly demanding for a higher education background and more knowledge content in market analysis and portfolio management.

8.4 Occupational Changes on the Floor

The red jackets on the trading floor were no longer a vital part of the trading chain, as their old functional roles of relaying clients' trading orders into the central trading space had been largely replaced by the trading software and the central order-matching system. Gradually the red jacket positions have less responsibility, a lower payroll, and a lower occupational status. Things like documents for physical delivery still have to go through the red jackets, but their tasks are support activities rather than at the centre of exciting market movement. The trading activities actually take place on computer systems, bypassing the trading floor.

Current female red jacket: In the past our job demanded physical, resilient and emotional strength. Now it becomes simply manual operation, like a handicraft... After they introduced the automatic systems, I felt empty idleness in my daily work.

The "empty idleness" could be confirmed by the lunchtime chats and field observations. The red jackets had to stay on the trading floor during trading hours, which were 9:00am-10:15am, 10:30am-11:30am, and 1:30pm-3:00pm. But at other times not many of them showed much dedication to the markets. Some young red jackets were studying part-time university programmes; older red jackets talked about their families and children. During the two-hour lunch break, the only amenity in the exchange building for the red jackets was a small reading room on 3/F. It was usually packed with red jackets, but only roughly 10% of them were reading

materials related to the markets, finance or economics. More often I found them reading newspapers and magazines on entertainment, lifestyle, gardening and home decoration. By 4pm, most of them had already left work. It was not a demanding job.

In response to occupational changes in the red jacket position, many member firms exercised a gender-linked pattern of internal transfer and recruitment. The red jacket position was considered more figurative than functional. More males than females were promoted away from the trading floor, while more “young and pretty” females rather than males were sent to work on the trading floor, and their merits were partly defined as objects to be looked at (Mulvey 1975).

Siu: Where have the males gone?

Current female red jacket P: Most of them are promoted to manager positions, and sent back to work from company offices. Others just left the industry.

Current female red jacket Q: Most companies tend to send pretty young girls to the trading floor now. They are pleasant to look at (賞心悅目).

Starting from the end of the 1990s, the old-time red jackets made choices between staying and moving away from the trading floor. In general, those who were more ambitious and aggressive tend to move away; those who stayed are rather content with a stable life, want to dedicate more time to family roles, studying, part-time jobs, or they have no better alternatives. The combined effect of the actions taken by employers and employees over a few years is that the trading floor of Exchange P gradually became a feminized space.

Veteran female red jacket: The trading floor is no longer important. In 2003 I sat there all day, having too much free time to myself. I didn't want to waste my life away like that! I quit the job and moved back to [another city]... Now I got a new job in a futures brokerage firm at their headquarters, doing management work.

Exchange P had been renting nearly all its office space from a convention and exhibition centre since the end of 1996. In 2005 there was another new building

being constructed next door. The new building was owed and built by the exchange itself, and the whole exchange is supposed to move into the new venue when the construction work finishes. There were widely circulated rumours that the exchange might abolish the trading floor altogether, and the same move may be taken by the other two Chinese futures exchanges at some point. Existing red jackets did have some concerns about their job security, although nobody was quite certain when they would be actually axed. When I talked to a member of staff in the other two exchanges about abolishing the trading floor, the only concern he had was, “That is possible. But then what are we going to show to our visitors?” In fact when China announced its fourth futures exchange, the China Financial Futures Exchange (中國金融期貨交易所, CFFEX) in Shanghai in 2006, the CFFEX made it explicit that the new exchange will not have a trading floor; everything will go electronic. The Chinese financial media reported this feature as an “advance” compared with the three earlier futures exchanges.

8.5 Technology and Gender in the Market

When global markets migrate from manual trading to electronic trading, a number of important changes may occur. This chapter is a record of one specific transition that took place in China’s commodity futures markets in 2000-2002: new possibilities in trading software and broadband networks have changed the pattern of agency and mediation. The access points of real-time quotes and trading terminals are further distributed, moving out from the hubs of local clusters (the offices of futures companies) to the offices and homes of individual traders. The reach of “connected markets” has moved one level down from the futures exchange, the provincial hubs, futures company offices in cities and towns, to reach the personal home. We can see that as the non-human components (network, hardware and software) distribute trading activities further into more scattered physical space, the roles of human brokers and red jackets are simultaneously being redefined. Technological connections, online access, advice, analysis, news and knowledge content are in; the onsite provision of refreshment, entertainment and personal company are out. An

ethnographic study cannot give a comprehensive overall picture of the transition, nonetheless this chapter captures some vivid phenomena of the above transition in China's futures markets – such as the close ties between brokers and clients before the transition; and how the company Webstock seized the opportunity of technology change to reshape the structure of the online futures trading software market.

Despite the fact that different market segments are located separately in physical space, the case illustrates their intimate connections. When the pattern of agency changes on the client-broker level, the change simultaneously propagates to the trading floor. Human agency and the brokering role on the centralized trading floor is quickly replaced by computer programmes installed at distributed, faraway locations. Exciting market events such as block trades and corners can now bypass the trading floor altogether, occurring directly between the traders' terminals, the brokers' network gateways, and the exchange's computer servers. Humans are still involved at the three locations, but the trading floor can be pre-empted.

Between 1998 and 2005 where the technology change took place, two dramatic phenomena could be observed on the trading floor during this critical transition: the decline in salary and status of the red jackets; and the change in gender ratio, with female percentage changing from 40% to 90%. Care should be taken when attempting to establish a direct cause-effect relationship between the two events. Which one is causing which?

In field records in section 8.1, how both male and female futures practitioners describe different skill sets verifies the views of Philips and Taylor (1980), and Levin (2001)⁷⁹. Women can be paid less because skills labeled as “feminine”, such as fast and accurate typing and multi-tasked mediation on the trading floor of Exchange P,

⁷⁹ The case study of Cockburn (1985) on the typesetting industry is a typical example of this gender-biased language of skills. Levin (2001) finds a similar classification of skills in the case study on work and gender in a US futures exchange.

are regarded as less valuable than skills labeled “masculine”, such as aggression and risk-taking. During occupational changes such as the redefinition of workflow and responsibilities, gender bias can be introduced in an apparently gender-neutral language of skills. A language of contradictory dichotomy (Cockburn 1988) can be observed in the workplace. If the job requires physical properties, “rough” and “tough” is deemed more valuable than “nimble”; if the job demands mental skills, “rational” is deemed more valuable than “attention to details”. Once females start to become the predominant gender in one position, the salary and status of the position start to fall, and male workers tend to move out from those jobs.⁸⁰ The rise in female ratio can be a direct cause of the fall in salary and status. On the other hand, already falling status and salary of the red jacket position can also impose a “gender filter” (Fernandez and Sosa 2005)⁸¹ to existing workers and new recruits. This is verified by observations in section 8.4. As the transition in online trading software takes place, male red jackets are more often promoted to managerial positions away from the floor, and young girls are more often recruited as their replacement.

Therefore, in this case we have technology shift acting as a trigger, starting off a coupled pair of occupational transitions on the trading floor: a rising female ratio of the red jackets, and the falling level of wages. The two conditions are reinforcing each other, leading to dramatic status decline and an equally dramatic

⁸⁰ Gender-segregated positions may form clusters of jobs that Cockburn (1988) terms as “gender cells”. She found that when women start to break into a formerly predominantly male “cell” in the high-tech industry, the salary falls and the males move out.

⁸¹ In a study on the call centre workspace, Fernandez and Sosa (2005) finds that males are less likely than females to get call centre jobs or stay there, because: firstly, male applicants have better alternatives in the job market; secondly, male applicants have better education background, hence they are often seen as “overqualified” by call centre employers; thirdly, a “sisterhood” referral network exists between existing call centre workers and new recruits, reinforcing a high ratio of female workers; and fourthly, when employers select new recruits for a call centre, their expectations are linked with female stereotypes.

change in gender ratio. At the end of the transition, the red jackets in city P have experienced such an obvious status decline that they are prohibited from entering the canteen for staff members of the exchange (see chapter 5).

The presence of Exchange P's female red jacket community provides field records of a predominantly feminized market space, which is a rare case in the social studies of global markets. Although the female red jackets are not the ones who actually make major trading decisions, and a stereotypically masculine style of trading is still recognized as more desirable in this market, the field subjects in city P do show the possibility of alternative values and practices of a feminized marketplace. They take pleasure both in launching big impacts on the markets, as well as from small things like lucid finger movements. However, whether men and women really have different trading styles is a largely open problem. In the study of Barber and Odean (2001), male stock investors are found to be overconfident compared with their female counterparts. They trade 45% more, and lose more of their net gains in transaction costs. Verheul and Thurik (2001) show that in small loan projects for entrepreneurs in developing countries, females are more prudent than males in running the finance of their start-up business. This leaves an interesting question: if skills and character traits labeled as feminine were recognized with higher rewards and status in the markets, would a different pattern of volatility or systemic risk be introduced to the market as a whole? The question is worthy of further research.

Chapter 9 Conclusion

From this ethnography, I have identified three features of China's commodity futures markets: the deep infiltration of politics, the significance of network-based social connections, and the conscious application of *boyi* (game theory) at common-sense level. This chapter will first give a brief summary of the three properties. Then I will return to the three academic objectives declared at the beginning of the thesis in section 1.2: the questions of performativity, market transplant and social embeddedness, and the provision of ethnographic fieldwork data. At the end of the thesis, I will also discuss the road ahead for this young market.

9.1 Cadres: Deep Infiltration of Politics

Chapter 5 shows that the markets were deeply infiltrated by the state structure and political power, and the state occupied an important role in the hierarchical market makeup. Regulatory officials often adopted the position that they were responsible to “monitor and manage” (*jianguan* 監管, to regulate) the markets, such that market stability could be sustained; members of the private sector also accepted such a market makeup, and many of them would expect the state to take actions when market crises occurred. (Such a position was in contrast to their counterparts in Hong Kong, the US or the UK, where neoclassical discourses such as “free” markets and “non-intervention” were often used by regulatory officials.)

Political power was an utmost foundation for market construction, because it was necessary to provide the access to material, organizational and legal resources for running futures exchanges. The evidence of strong political support was also essential to foster public trust in a market. Under such a market structure, prices were extremely sensitive to policy news; state enterprises were major players of the markets; and regional governments often served as “guardian angels” of local futures exchanges and local futures companies. Sometimes the infiltration of political power might lead to problems of corruption, but infiltration itself was not equivalent to

corruption. The state structures were simply the most essential parts of the futures markets that must be present in this form of market construction. In fact the state structures and the markets were closely symbiotic: communism had been commodified, capitalism had been politicized, and both were mutually infiltrating each other in the actual social institutions. State structures and cadres were an integral part of the markets.

9.2 Gangs: Network-based Rationality

Chapter 6 shows that the corner events in the 1990s were active attempts of market manipulation by close teams, or loose gang-like networks. The presence of extensive *guanxi* (relationship) networks by geographical areas, industry sectors and personal acquaintances (built upon an existing network-based social structure) made it possible for traders to form cooperation cliques of different degrees of strength. Such cliques could range from strong collusion teams to loose connected cliques for occasional information exchange. Gang-like aggregates were examples of the active use of social connections and networks to alter the outcome of market prices. The aggregates might also penetrate across the public-private boundary to establish flexible, clientelist ties with the public and quasi-public sectors. In one case of Exchange Q, network-based rationality seemed to override rule-based rationality in the market making system of 1-2 products.

However, as the market depth (in terms of total capitalization, and number of traders) was increasing in the 2000s, and with tight regulatory control, it was more difficult for a single group to launch corner events and achieve effective market manipulation. More often traders talked about trends (趨勢) rather than corners (*bicang* 逼倉) – to decipher and ride on market trends and collective momentum, rather than using the influence of one's own capital and social connections to generate a new momentum.

9.3 Priests: Application of “Game Theory”

A number of “knowledge tools” such as fundamentals, chartism, trading heuristics, and programmed trading had been circulating in the markets. The use and circulation of these tools were supported by analysts, software companies, brokerage firms, industry groups, academics, and the media – all of which served as intermediaries of knowledge and meanings. However, for most field subjects the choice of knowledge tools were rather arbitrary – many of them made the choice based on accessibility, ease of use, or affordable cost. The choice rarely arose from deeper causes in ideologies or convictions. Most field subjects were ready to switch to new knowledge tools, if they could be convinced by evidence that the new tool could give better investment returns. The lack of faith and ideologies was remarkable. Unlike some of their counterparts in western markets, in this case study most of the market people did not hold precepts such as “markets are efficient”, “traders are rational”, “traders exercise rationality on individual basis”, or “every asset has an intrinsic value”. They were open-minded to learn and try out various models and tools, but there were also extremely pragmatic and result-oriented. The ultimate touchstone of any theories or tool was return of investment, not Nobel-prizes in economics. (In fact I found books of the Black-Scholes model of derivative pricing theory gathering dust on some field subjects’ bookshelves. They told me that the model “did not work” in China’s futures markets due to the limited types of investment tools available, the prominence of policy factors, and other “Chinese characteristics” of the markets.) In the search of profits, even theories and knowledge tools were commoditized. Each market actor was acting as her own priest to adopt and discard various knowledge tools.

The field subjects did not hold fixed beliefs in financial theories, but they did believe in “trends” and *boyi* (博弈, the application of game theory in a common-sense level). Many field subjects were aware that “trends” and market prices were the combined result of thoughts and actions by everybody in the market, which were open to infinite possibilities. By *boyi*, field subjects were estimating what most

people estimated about what most people estimated about... the next action most people would take in the markets. Most of the time the bootstrapped estimations were exercised by intuition and common-sense only, yet the thinking process could be reflexive.

9.4 A Dialogue with the Performativists

My first research objective was to seek for evidence of performativity from the field. In the daily activities of the market agents, people and technological artefacts were heavily connected by personal networks and information technologies. The market agents were highly sensitive to signals in price data, politics, fundamentals, and the sentiments of others. One prerequisite of *boyi* is to be aware of one's position as part of a big, inter-connected cognitive array.

Chartism was widely adopted in the field. However, due to the multiple possible ways to read charts and the highly subjective nature of graphical methods,⁸² usually it was not easy to generate a strong and common consensus amongst chartists in their forecasts. This made chartism a good knowledge tool for the analysts and software companies to market their services, and perhaps a good means to deepen a sense of professional membership in the industry (see Preda 2004). However in most situations, I did not find chartism in China's futures markets a very strong case of performativity. A large proportion of futures people in the field did use technical analysis; therefore by the definition of MacKenzie (2007), chartism was at least a case of generic performativity. Whether chartism should be counted as a case onto the next level of performativity – effective performativity – was already arguable. Individual traders might claim that they made profits or losses by applying methods of chartism; it was true that chartism could “make a difference to economic

⁸² In the five-day training course, my coursemates recognised the same chart as having three, four, six, seven, and nine “waves”.

processes” on the individual basis. However on a collective scale, due to the lack of consensus amongst chartists (in market direction, target price levels, and suggested stop-loss positions), it was likely that the effects of a significant part of their forecasts would cancel out each other. That is also why chartism is often dismissed as “noise” by academics of finance.

If we inspect the feedback pathway between knowledge, action and market reality, what could generate wider consensus and lead to synchronized actions in the China’s futures markets in 2005? I think it was power – both political power, and power of the masses. The market people spent a lot of time speculating the direction of policies. Traders were sensitive to move their money to futures products and futures exchanges that seemed to be favoured by the regulatory authorities. By doing so, those products could gain wider market depths and better liquidity; which indeed could help the particular futures exchange to gain a better position in front of regulatory authorities. Instead of a feedback loop of market prices, here we have a feedback loop of political standing (Fig 9.1). This feedback loop illustrates the deep infiltration between politics and markets. Political favour could not be directly traded in the markets, yet it served as a commodity that could rise, fall, and be exchanged. Notice that it is a feedback loop of Barnesian performativity (MacKenzie 2007). Perception of the market agents (political favour) led to action (trading decisions), which eventually helped to make the perception true. The Barnesian feedback cycles could also go in the opposite direction: if traders perceived that a market was losing the favour of regulatory authorities, there was an actual policy risk that its products and even the exchange itself could be closed down (as in the case of Tianjin in 1998, see section 7.4). The flight of capital would lead to a shrinking market with low liquidity, which was likely to lead to a lower political standing of the exchange. That was why at all the futures exchanges, photographs of important state leaders were hung outside the trading floor as an important evidence of political support.

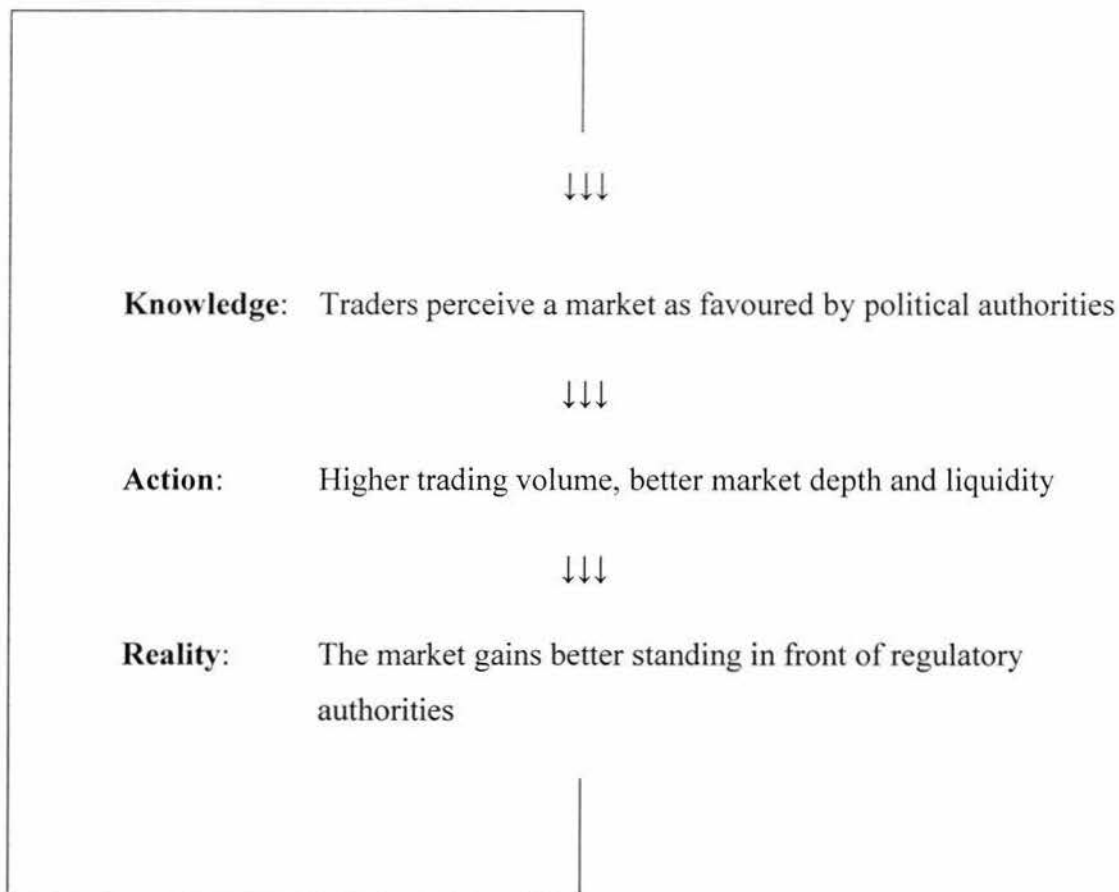


Fig 9.1 Feedback loop of political standing in market construction

I agree with Didier (2007) and Callon (2007) that, markets are not purely constructed by language and theories alone. For market *agencement* to take place, conditions of felicity are needed. In this particular case study, political power and social networks (with cultural contexts) were more important issues to “make things work” in the markets. What matters in every market can be different, expressing the political and social structure, cultural values, legal and historical background of that particular society. Rationality and calculation is only *one* of the parameters of markets *agencement*. While the notion of calculative devices from Callon and Muniesa (2003) can be helpful to analyze the cognitive flow of markets, the parameters of power and culture cannot be dissolved too much. As we have seen in this research, the hierarchical market structure of public and private sectors, and the distribution of income were real issues that mattered; the perceived political standing was vital.

9.5 On Market Transplant and “Chinese Characteristics”

Here we can revisit the second academic objective of this study: the technology transfer model of Alkrich (1992) described in Chapter 1. Within a history of 15 years in China’s commodity futures markets, the market “script” that was originally transferred from overseas markets had been interacting with the local political and cultural surroundings to form a different version of futures markets. Despite a limited market size, the markets were running with fluctuating supply, demand and prices. We can note that the state structures and the market structures were mutually infiltrating each other, and the roles of public and private sectors in the markets were different from most of the foreign markets where the original “script” came from. Social connections in the futures markets often went alongside gifts, favours, and banquets of *guanxi* connections, and the flexibility of network-based rationality. The integration of generic market structures and more specific local context had indeed taken place.

One local differentiation of the futures people of China was that, they could be more daring than their western counterparts to abandon the theoretical assumptions and ideologies behind capitalism (see also Gray 2002: 191-193). I found that my field subjects were not easily convinced or mobilized by economic theories or ideologies. It is a country where 800 million people had experienced the Great Leap Forward (大躍進) and the Cultural Revolution in the 1950s – 1960s. These political movements could be understood as extreme experiments of Austinian performativity – in which the nation once believed that materiality could be overcome by political ideologies and social construction led by Mao Zedong. The experiment’s bitter failure, accompanied by long years of famines and hardship, was still a painful collective memory for the nation. That could be a good reason why my field subjects were pragmatic when it came to social construction of materiality. They were looking for “things that work” for economic development and personal

income, but in general they had little loyalty to knowledge models, theories or ideologies *per se*.

Instead they chose to focus on what I call the “vanilla core” of generic markets: markets as a big, collective feedback system, regardless of how market agents arrive at their decisions. If there is anything “hardwired” into the script of markets, it is the organization of such a collective feedback system of consensus (knowledge), action and social reality. The consensus can be about economic outlook, political outlook, an ideology, a mathematical formula, an analytical tool, or a rumour. What the particular content is will be largely dependent on the particular economic, cultural, and political context – rationality is only one of the possibilities. The key factor of generic market construction is the capability to establish a strong, circulating consensus. A market is likely to be stabilized and successful, if strong and stable feedback loops of Barnesian performativity can be established.

The third academic objective of this research is to provide ethnographic data for the social studies of finance, economic anthropology, and economic sociology. By the work presented here, I hope the amount of ethnographic data suffices to fulfill this purpose.

9.6 The Road Ahead

15 years is a very young age for derivative markets. This research has described a number of crises, difficulties and problems in the futures markets of China, but the author never mean to present this study as part of the “China bashing” chorus from occidental standpoints. Market *agencement* requires heterogeneous input factors. Market construction in any country is expected to encounter problems and difficulties; and any market construction process will contain some trials, errors, and adjustments. Before drawing this thesis to a close, I have three comments on the prospect of this market.

The first point is about the asymmetrical strength between the public and private sectors. The asymmetry arises directly from the allocation of profitable opportunities – the public and quasi-public sectors had become the seats of real profits. That is also why in 1993 (and probably in 1921 also), heated competition took place in constructing new exchanges, not in trading activities in existing exchanges. Although the asymmetry arises from political and historical background, on the long-run, weaknesses of the private sector (private investment funds, brokerage firms, and retail investors) will greatly limit the industry's development. This is especially true when the local markets are open to global ones. To reform the industry and prepare for an open market, the public sector has to gradually reduce its profit margins and help to build a stronger private sector.

The second point is, with the deep infiltration between the state structure and the market structure, there are always the risks of corruption and misappropriation of state funds. With the lessons from Event 327, it is important that the regulatory authorities keep a close watch against such practices.

The third point is, for a young market, the market agents were already highly sensitive to decipher, synchronize with, and pre-empt the actions of others, and they were aware of the importance of *boyi*. These were essential skills and talents that the private sector has to identify, recruit and nurture.

Local characteristics ("Chinese characteristics" in a non-essentialist sense) of the futures markets indeed exist; and "Chinese characteristics" can either be strengths or weaknesses. Instead of using the phrase for self justification or cynical mockery, it is more helpful to honestly face the industry's current position, understand where the strengths and weaknesses are, and bravely stride ahead.

Bibliography

- 21st Century Economic Report (2004). GMO Soybeans Returns to the Market after a 2-year Break 「轉基因大豆退市 2 年捲土重來」. 《21 世紀經濟報道》 21st Century Economic Report. 28 Oct 2004.
- Abolafia, M. (2005). Interpretive Politics at the Federal Reserve. *The Sociology of Financial Markets*. K. K. Cetina and A. Preda. Oxford, Oxford University Press: 207-228.
- Abolafia, M. Y. (1996). *Making Markets: Opportunism and Restraint on Wall Street*. Cambridge, MA, Harvard University Press.
- Abolafia, M. Y. (1996). Structured Anarchy: Formal and Informal Organization in the Futures Market. *Making Markets*. London, Harvard University Press: Chapter 2.
- Abolafia, M. Y. (1998). Markets as Cultures: an Ethnographic Approach. *The Laws of the Markets*. M. Callon. Oxford, Blackwell: 69-85.
- Acker, J. (1990). "Hierarchies, Jobs, Bodies: A theory of Gendered Organizations." *Gender and Society* 4 [2]: 139-158.
- Akrich, M. (1992). The De-Description of Technical Objects. *Shaping Technology / Building Society*. W. E. Bijker and J. Law. Cambridge, MIT Press: 205-224.
- Allen, F. and D. Gale (1994). *Financial Innovation and Risk Sharing*. Cambridge, MA, MIT Press.
- Allen, H. and M. P. Taylor (1990). "Charts, Noise and Fundamentals in the London Foreign Exchange Market." *The Economic Journal* 100(400): 49-59.
- Altman, R. M. (1988). *Creating Investor Demand for Company Stock: a Guide for Financial Managers*. New York, Quorum Books.
- Anker, R. and International Labour Office. (1998). *Gender and Jobs: Sex Segregation of Occupations in the World*. Geneva, International Labour Office.
- Annonymous. (2004). "Zhengzhou's 1.18 Mung Bean Incident (鄭州 1.18 綠豆事件)." from <http://www.byfutures.com/htdocs/XXLR1.ASP?ID=5688>.
- Annonymous. (2005). "大連市商業銀行董事長姜麗華致辭." 中國商業銀行經營管理高層論壇專題, from <http://tech.sina.com.cn/it/2005-04-09/0921576726.shtml>.
- Annonymous (2006). Can Chengsha's Rice Market Rise Again? China Agricultural Information Network.
- Annonymous (2006). 期貨市場應服務於新農村建設. 中國經濟周刊. 11.
- Archibald, J. and WiC (2005). *The Gender Politics of ICT*. Queensway, Middlesex University Press.
- Arkush, R. D. (1997). "Review on Occidentalism: Images of the West." *The Journal of Asian Studies* 56 [1]: 144-147.
- Arnoldi, J. (2004). "Derivatives: Virtual Values and Real Risks." *Theory, Culture & Society* 21/6: 23-24.

- Arnoldi, J. (2006). *Frames and Screens - The reduction of uncertainty in electronic derivatives trading*, Institut für Soziologie der Ludwig-Maximilians-Universität München.
- Arthur, B. (1994). *Increasing Returns and Path Dependence in the Economy*. MI, University of Michigan Press.
- Arthur, W. B. (1984). "Competing Technologies and Economic Prediction." *Options* April: 10-13.
- Atkinson, R. and J. Flint (2001). "Accessing Hidden and Hard-to-Reach Populations: Snowball Research Strategies." *University of Surrey: Social Research Update*(33).
- Babbie, E. (1995). *The Practice of Social Research*. Belmont, Wadsworth
- Baker, W. (1984). "The Social Structure of a National Securities Market." *American Journal of Sociology* 89(4): 775-811.
- Barad, K. (2003). "Posthumanist Performativity: Understanding how Matter comes to Matter." *Signs: Journal of Women in Culture and Society* 28(3): 801-831.
- Francis, C-B. (2001). "Quasi-Public, Quasi-Private Trends in Emerging Economies: The Case of China." *Comparative Politics* 33 3: 276-294.
- Barber, B. M. and T. Odean (2001). "Boys Will be Boys: Gender, Overconfidence, and Common Stock Investment." *The Quarterly Journal of Economics* 116 [1]: 261-292.
- Barmé, G. (1995). "To Screw Foreigners is Patriotic: China's Avant-Garde Nationalist." *The China Journal* 34: 209-234.
- Barnes, B. (1983). "Social Life as Bootstrapped Induction." *Sociology* 17 17: 524-545.
- Barnes, B. (1995). *The Elements of Social Theory*, UCL Press.
- Barnes, B. and D. Edge, Eds. (1982). *Science in Context: Readings in the Sociology of Science*. Milton Keynes, Open University Press.
- Barry, A. and D. Slater (2005). *The Technological Economy*. London, Routledge.
- Baudrillard, J. (1981). *For a Critique of the Political Economy of the Sign*. St Louis, Telos.
- Baudrillard, J. and M. Poster (1988). *Selected writings*. Cambridge, Polity.
- Bernstein, P. L. (1993). *Capital Ideas: the Improbable Origins of Modern Wall Street*. New York ; London, Free Press.
- Beunza, D., I. Hardie, et al. (2006). *A Price is a Social Thing: Towards a Material Sociology of Arbitrage*.
- Beunza, D. and F. Muniesa (2005). *Listening to the Spread Plot. Making things public : atmospheres of democracy*. B. Latour and P. Weibel. Cambridge, Mass. ; [Karlsruhe, Germany], MIT Press : ZKM/Center for Art and Media in Karlsruhe: 628-633.
- Beunza, D. and D. Stark (2004). "Tools of the Trade: the Socio-Technology of Arbitrage in a Wall Street Trading Room." *Industrial and Corporate Change* 13 [2]: 369-401.

- Bian, Y. and J. R. Logan (1996). "Market Transition and the Persistence of Power: The Changing Stratification System in Urban China." *American Sociological Review* 61(5): 739-758
- Bikhchandani, S. and S. Sharma (2000). *Herd Behavior in Financial Markets: a Review*, International Monetary Fund Institute.
- Black, D. G. (1986). *Success and Failure of Futures Contracts: Theory and Empirical Evidence*. Monograph Series in Finance and Economics. A. Saunders. New York, Schools of Business of New York University: 1-67.
- Blaikie, N. (2000). *Designing Social Research*. Cambridge, Polity.
- Block, F. (2001). Introduction. *The Great Transformation*. K. Polanyi. Boston, Beacon Press. xviii-xxxviii.
- Bloor, D. (1997). *Wittgenstein, Rules and Institutions*. London, Routledge.
- Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge, Cambridge University Press.
- Bourdieu, P. and L. Wacquant (1992). "Epistemic Reflexivity" and "The Logic of Fields". *An Invitation to Reflexive Sociology*. Cambridge, Polity: 36-46, 94-101.
- Boyer, R. (2005). "How and Why Capitalisms Differ." *Economy and Society* 34(4): 509-557.
- Brahm, L. and D. R. Li (1996). *Emerging Securities Markets. The Business Guide to China*. Singapore, Naga China Investments.
- Bray, F. (2007). Introduction: the Powers of Tu. *Graphics and Text in the Production of Technical Knowledge in China: The Warp and the Weft*. F. Bray, V. Dorofeeva-Lichtmann and G. Métaillé. Leiden, Brill: 1-78.
- Burgess, R. G. (1984). *In the Field: an Introduction to Field Research*. London, Routledge.
- Burling, R. (1962). "Maximization theories and the study of economic anthropology." *American Anthropologist* 64: 802-881.
- Burned-Account, 追憶爆倉歲月. (2007). *The Original Sins of the Longs: Exploring the Structure of China's Futures Markets (多頭的「原罪」——中國期貨市場結構初探)*, Hexun Forum 和讯論壇
- Burns, J. P. (1989). "Review: The Reach of the State: Sketches of the Chinese Body Politic by Vivienne Shue." *The China Quarterly*(117): 146-147.
- Burns, J. P. (1994). "Strengthening Central CCP Control of Leadership selection: The 1990 Nomenklatura." *The China Quarterly*(138): 458-491.
- Burt, R. S. (1995). *Structural Holes - The Social Structure of Competition*, First Harvard University Press.
- Burt, R. S. (2005). *Brokerage and Closure - An Introduction to Social Capital*. New York, Oxford University Press.
- Caliskan, K. (2005). *Making a Global Commodity: The Production of Markets and Cotton in Egypt, Turkey and the United States*. Department of Politics. New York, New York University. PhD.

- Callon, M. (1998). *Laws of the Markets*, Blackwell.
- Callon, M. (2002). Actor-network Theory: the Market Test.
- Callon, M. (2007). What does it mean to say that Economics is Performative? Do Economists Make Markets? D. MacKenzie, F. Muniesa and L. Siu. Princeton, Princeton University Press: 311-357.
- Callon, M., Y. Millo, et al. (2007). *Market Devices*. Oxford, Blackwell.
- Callon, M. and F. Muniesa (2003). "Economic markets as calculative collective devices." *Réseaux* 21(122): 189-233.
- Cao, J. (2006) "Innovation: the Driving Force behind Futures Companies." Beijing Futures Association
- Carrier, J. G. (1995). *Occidentalism: Images of the West*. Oxford, Clarendon Press.
- Carrier, J. G. (1997). *Meanings of the market : the Free Market in western culture*. Oxford, Berg.
- Carter, C. A. and F.-N. Zhong (1991). "China's past and future role in the grain trade." *Economic Development and Cultural Change* 39(4).
- Chan, G. and K. Lau (2004). *Adam Cheng Effect: CLSA Hong Kong Market Outlook*. Hong Kong, CLSA report.
- Chang, Q. (2005). *Establishing the subjectivity of China's Futures Markets*. Futures Daily. Zhengzhou.
- Chen, K.-Y., L. R. Fine, et al. (2001). *Forecasting Uncertain Events with Small Groups*. Third ACM Conference on Electronic Commerce (EC'01).
- Chen, X. (1995). *Occidentalism: A Theory of counter-Discourse in Post-Mao China*. New York, Oxford University Press.
- Chen, Y. e. a. (1993). *Futures Trading*. Beijing, China Chemical Industry Publisher.
- Chen, Z. and D. Zuo (1994). "Lessons learned from the Minshi Xinjiao incident "民十信交风潮"的教训." *Economic Herald 經濟導刊* 1994(3).
- Cheng, D. 鄭. and Q. 孫. Suen (2005). "Why Traditional Futures Exchanges Adopt Non-profit-based Membership Systems (傳統期貨交易所選擇非盈利性會員制動因探析)." *The Border Economy and Culture (邊疆經濟與文化)* [1]: 78-80.
- ChinaBusiness (2003). 海南橡膠走勢詭異 空頭背景神秘 多頭有苦難言. 中國經營報 (China Business).
- China-Futures-Association (2007a). *Futures Mart Tutorial: Foundation knowledge for the national qualification exam of futures industry practitioners (期貨市場教程：全國期貨從業人員資格考試用書- 基礎知識部分)*. Beijing, China Finance and Economics
- China-Futures-Association (2007b). *Laws and regulations on futures: for the national qualification exam of futures industry practitioners (期貨法律法規匯編：全國期貨從業人員資格考試用書)*. Beijing, China Finance and Economics

- China-Securities-Regulatory-Commission (2004). China's Securities and Futures Markets. CSRC, CSRC website.
- Chu, G. C. (1973). "Review: Communications and National Integration in Communist China" by Alan P.L. Liu." *The Public Opinion Quarterly* 37(1): 152-153.
- Cockburn, C. (1983). *Brothers: Male Dominance and Technological Change*. London, Pluto Press.
- Cockburn, C. (1985). *Machinery of Dominance: Women, Men and Technical Know-how*. London, Pluto.
- Cockburn, C. (1985). *The Material of Male Power. The Social Shaping of Technology*. D. MacKenzie and J. Wajcman. Buckingham, Open University Press: 177-198.
- Cockburn, C. (1988). *The Gendering of Jobs: Workplace Relations and the Reproduction of Sex Segregation. Gender segregation at work*. S. Walby. Milton Keynes, Open University Press: 29-42.
- Cohen, R. and P. T. Kennedy (2007). *Global Sociology*. Basingstoke, England ; New York, N.Y., Palgrave Macmillan.
- Coleman, W. (1991). "Economics and Sociology: Discrete, Overlapping or Merged?" *American Journal of Economics and Sociology* 50(4): 389-390+501-502
- Collins, H. M. and R. J. Evans (2002). "The Third Wave of Science Studies: Studies of Expertise and Experience." *Social Studies of Science* 32(2): 235-296.
- Cook, S. (1966). "The Obsolete "Anti-market" Mentality: a Critique of the Substantive Approach to Economic Anthropology." *Southwestern Journal of Anthropology* 25(4): 378-406.
- Coote, B. (1964). *Exception Clauses - Some Aspects of the Law relating to Exception Clauses in Contracts for the Carriage, Bailment and Sale of Goods*. London, Sweet and Maxwell.
- Cronon, W. (1991). *Nature's Metropolis: Chicago and the Great West*. New York, Norton.
- Crotty, M. (1998). *Introduction: the Research Process. The Foundations of Social Research: Meaning and Perspective in the Research Process*. London, Sage: Chapter 1.
- CSRC (2004). China's Securities and Futures Markets. C. S. R. Commission, CSRC website.
- CSRC (2004). *Report: China's Securities and Futures Markets*, China Securities Regulatory Commission.
- CSRC (2005). *China Securities and Futures Statistical Yearbook 2005*. Shanghai, Xuelin.
- Czarniawska, B. (2006). "Doing Gender unto the Other: Fiction as a Mode of Studying Gender Discrimination in Organizations." *Gender, Work and Organization* 13(3): 234-253.
- Dalian-Commodity-Exchange (2003). *Introduction to Futures Transactions 期貨交易入門*.
- Dalton, G. (1961). "Economic Theory and Primitive Society." *American Anthropologist* 63(1): 1-25.

- Dang, J. (2001). 中國期貨市場風險回顧之八：海南中商所咖啡 F703 事件。中國期貨市場風險回顧, Hexun Wang 和訊網。
- Dang, J. and Z. Ba (2001). 中國期貨市場風險回顧之二：「三二七」國債期貨風波。中國期貨市場風險回顧, Hexun Wang 和訊網。
- Dang, J., Huang, et al. (2001). China Futures Risk Review Series.
- David, P. A. (1992). "Heroes, Herds and Hysteresis in Technological History: Thomas Edison and 'The Battle of the Systems' Reconsidered." *Industrial and Corporate Change* 1: 129-180.
- Davis, M. (1990). *City of Quartz: Excavating the Future in Los Angeles*. London, Verso.
- DCE. (2003). "期貨交易入門", from <http://www.dce.com.cn/>.
- DCE. (2003). "農產品套期保值指南." from <http://www.dce.com.cn/>.
- de Long, J. B., A. Shleifer, et al. (1990). "Positive Feedback Investment Strategies and Destabilizing Rational Speculation." *The Journal of Finance* 45(2): 379-395.
- Deleuze, G., H. R. Lane, et al. (1984). *Anti-Oedipus: Capitalism and Schizophrenia*. London, Athlone.
- Denzin, N. (1978). *Unobtrusive Measures: the Quest for Triangulated and Nonreactive Methods of Observation*. The Research Act- a theoretical introduction to sociological methods. London, McGraw-Hill: Chapter 9-10.
- Didier, E. (2007). Do Statistics "Perform" the Economy? Do Economists Make Markets? D. MacKenzie, F. Muniesa and L. Siu. Princeton, Princeton University Press: 276-310.
- Dietrich, M. (1994). *Transaction Cost Economics and Beyond: Towards a New Economics of the Firm*. London, Routledge.
- Dilley, R. (1992). *Contesting Markets: Analyses of Ideology, Discourse and Practice*. Edinburgh, Edinburgh University Press.
- Dong, K. (1991). *The Historical and Social Background. The Agricultural of China*. Xu and Peel, Oxford University Press.
- Du, S. 杜. (1996). Financial Innovation during economic transformation 經濟轉型中的金融創新. Shanghai, Lixin Accounting 立信會計.
- Du, W. (1995). *Agricultural Marketed Surplus Response in China*. Hants, Avebury
- Dyer, G. (2006). Wobbly rung on Shanghai property ladder. *Financial Times*.
- Dyer, G. (2006). A Wobbly Rung on the Shanghai Property Ladder. *Financial Times*.
- Edgerton, R. B. (1985). *Rules, Exceptions, and Social Order*. Berkeley, Calif. ; London, University of California Press.
- Edwards, R. D. and J. Magee (1966). *Technical Analysis of Stock Trends*. Springfield, John Magee.

- Entwistle, B. and G. Henderson (2000). *Re-drawing Boundaries: Work, Households, and Gender in China*. Berkeley ; London, University of California Press.
- Evans, M. D. D. and R. K. Lyons (2003). *How is Macro News Transmitted to Exchange Rates?*, National Bureau of Economic Research, Inc.
- Exchange, D. C. (2003). "十年風雨十年路 發展歷程." Retrieved 14 July 2005, 2005, from <http://www.dce.com.cn/huace/road.shtml>.
- Fallon, W. D. (1998). *Market Maker: A Sesquicentennial Look at the Chicago Board of Trade*. Chicago, CBOT.
- Fan, H. 范. (2004). *The Reform of Shiye Danwei: International Experience and the Exploration of China (事業單位改革：國際經驗與中國探索)*. Beijing, China Finance and Economics Publishing (中國財政經濟出版社).
- Fay, S. (1982). *The Great Silver Bubble*. London, Hodder and Stoughton.
- Fei, X. (1992 [1947]). *From the Soil - Foundations of Chinese Society* (English translation of *Xiangtu Zhongguo*). Berkeley, University of California Press.
- Fei, X. (2005 [1947]). *From the Soil (Xiangtu Zhongguo)*. Beijing, Beijing Publishing House.
- Fei, X. and X. Wu (1948). *Power of the Monarch, Power of the Gentry (皇權與紳權)*. Shanghai, Observation Society.
- Fernandez, R. M. and M. L. Sosa (2005). "Gendering the Job: Networks and Recruitment at a Call Center." *American Journal of Sociology* 111(3): 859-904.
- Fielding, N. (1993). *Ethnography. Researching Social Life*. London, Sage: Chapter 9.
- Firth, R. (1936). *We, the Tikopia: a Sociological Study of Kinship in Primitive Polynesia*. London, .
- Fisher, M. (2006). *Wall Street Women: Navigating Gendered Network in the New Economy. Frontiers of Capital: Ethnographic Reflections on the New Economy*
- M. Fisher and G. Downey. Durham, Duke University Press.
- Fleck, J. (1994). "Learning by Trying: The Implementation of Configurational Technology." *Research Policy* 23: 637-652.
- Fligstein, N. (1996). "Markets as Politics: A Political-Cultural Approach to Market Institutions." *American Sociological Review* 61: 656-673.
- Fligstein, N. (2001). *Politics, Governments, and Financial Markets. The Architecture of Markets*. New Jersey, Princeton: 209-213.
- Fligstein, N. (2002). *The Architecture of Markets - an Economic Sociology of Twenty-First-Century Capitalist Societies*. Princeton, Princeton University Press.
- Foray, D. (2004). *Economics of Knowledge*. Cambridge, Mass. ; London, MIT Press.

- Forbes, K. J. and R. Rigobon (2002). "No Contagion, Only Interdependence: Measuring Stock Market Comovements." *The Journal of Finance* 57(5): 2223-2261.
- Fortnow, L., J. Kilian, et al. (2005). "Betting Boolean-Style: A Framework for trading in Securities Based on Logical Formulas." *Decision Support Systems* 39: 87-104.
- Foucault, M. (2002 [1966]). *Exchanging. The Order of Things*. London, Routledge: 180-232.
- Francis, A., J. Turk, et al. (1983). *Power, Efficiency and Institutions: a Critical Appraisal of the "markets and Hierarchies" Paradigm*. London, Heinemann Educational.
- Francis, C-B. (2001) *Quasi-Public, Quasi-Private Trends in Emerging Market Economies: The Case of China*. *Comparative Politics* 33(3), 275-294, Apr 2001.
- Friedman, T. L. (2005). *The World Is Flat: A Brief History of the Twenty-first Century*. New York, Farrar, Straus and Giroux.
- Fung, B. Y. (2002). *Hong Kong's Financial Development in a Century (香港金融業百年)*. Hong Kong, Joint Publishing.
- Garcia-Parpet, M-F. (2007). *The Social Construction of a Perfect Market: the strawberry auction at Fontaines-en-Sologne*. D. MacKenzie, F. Muniesa and L. Siu. Princeton, Princeton University Press: 41-89.
- Garfinkel, H. (1967). *Studies in Ethnomethodology*. NJ, Prentice Hall.
- Gates, H. (1986). *The Petty Capitalist Mode of Production. Anthropological Perspectives on Mainland China, Past and Present*, Center for Chinese Studies, University of California at Los Angeles.
- Gates, H. (1987). "Money for the Gods." *Modern China* 13(3): 259-277.
- Gates, H. (1996). *China's Motor: a Thousand Years of Petty Capitalism*. Ithaca ; London, Cornell University Press.
- Geras, N. (1971). "Fetishism in Marx's Capital." *New Left Review* 65: 69-85.
- Gerber, T. P. and M. Hout (1998). "More Shock than Therapy: Market Transition, Employment, and Income in Russia, 1991-1995." *The American Journal of Sociology* 104(1): 1-50
- Gneezy, U., M. Niederle, et al. (2001). *Performance in competitive Environments: Gender differences*.
- Godechot, O. (2005). *Les Traders: Essai de Sociologie des Marchés Financiers*. Paris, La Découverte.
- Goede, M. d. (2005). *Virtue, Fortune, and Faith: A Genealogy of Finance*. Minneapolis, University of Minnesota Press.
- Gold, T. B., D. Guthrie, et al. (2002). *Social Connections in China: Institutions, Culture and the Changing Nature of Guanxi*. Cambridge, Cambridge University Press.
- Gran, P. (1980). "Orientalism." *Journal of the American Oriental Society* 100(3): 328-331.

- Granovetter, M. (1973). "The Strength of Weak Ties." *The American Journal of Sociology* 78(6): 1360-1380.
- Granovetter, M. (1990). *The Old and the New Economic Sociology: a History and an Agenda. Beyond the marketplace: rethinking economy and society.* F. Robertson. New York, Aldine de Gruyter: Chapter 3.
- Granovetter, M. (1992). "Economic Institutions as Social Constructions: A Framework for Analysis." *Acta Sociologica* 35: 3-11.
- Granovetter, M. S. (1983). *The Strength of Weak Ties: a Network Theory Revisited.* Sociological Theory. R. Collins. San Francisco, Jossey-Bass: 201-233.
- Granovetter, M. S. (1985). "Economic Action and Social Structure: the Problem of Embeddedness." *American Journal of Sociology* 91: 481-510.
- Granovetter, M. S. (1999). *Economic action and social structures.*
- Granovetter, M. S. (2002). *Economic Institutions as Social Constructions.*
- Granovetter, M. S. and R. Swedberg (2001). *The Sociology of Economic Life.* Boulder, Colo., Westview Press.
- Grant, J. (2006). *BP Cccused of Manipulating Propane Prices.* Financial Times.
- Gray, J. (2002). *False Dawn - the Delusions of Global Capitalism.* London, Granta
- Greising, D. and L. Morse (1991). *Brokers, bagmen, and moles: fraud and corruption in the Chicago futures markets.* New York ; Chichester, John Wiley & Sons.
- Groenewegen, J. (1995). *Transaction Cost Economics and Beyond.* Netherlands, Kluwer Academic Publishers Group.
- Gruchy, A. G. (1978). "Institutional Economics: Its Influence and Prospects." *American Journal of Economics and Sociology* 37(3): 271-281.
- Guala, F. (2007). *How to Do Things with Experimental Economics. Do Economists Make Markets?* D. MacKenzie, F. Muniesa and L. Siu. Princeton, Princeton University Press: 128-162.
- Gudeman, S. (1992). *Markets, Models and Morality. Contesting markets: analyses of ideology, discourse and practice.* R. Dilley. Edinburgh, Edinburgh University Press: 279-293.
- Guldin, G. E. (1994). "Review of *From the Soil: The Foundations of Chinese Society*, a Translation of Fei Xiaotong's *Xiangtu Zhongguo*." *The China Quarterly* 137: 262-263.
- Guo, H. C. (2006). *Who is Manipulating International Prices by "China Factor".* The Economic Observer. Beijing.
- Guthrie, D. (1998). "The Declining Significance of Guanxi in China's Economic Transition." *The China quarterly* 154: 254-282.
- Guthrie, D. (2000). "Review: Understanding China's Transition to Capitalism: The Contributions of Victor Nee and Andrew Walder." *Sociological Forum* 15(4): 727-749.

- Halek, M. and J. G. Eisenhauer (2001). "Demography of Risk Aversion." *The Journal of Risk and Insurance* 68(1): 1-24.
- Halford, S., M. Savage, et al. (1997). *Gender, Careers and Organisations: Current Development in Banking, Nursing and Local Government*. Basingstoke, Macmillan.
- Hall, P. A. and D. Soskice, Eds. (2001). *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. New York, Oxford University Press.
- Hamilton, G. (1984). "Patriarchalism in Imperial China and Western Europe." *Theory and Society* 13(3): 393-425.
- Hamilton, G. (1994). *Civilizations and the Organization of Economies*. *The Handbook of Economic Sociology*. N. J. Smelser and R. Swedberg, 183-205: Chapter 8.
- Hamilton, G. (1999). *Cosmopolitan capitalists: Hong Kong and the Chinese diaspora at the end of the twentieth century*. Seattle, University of Washington Press.
- Hammel, E. A. (1980). "The Comparative Method in Anthropological Perspective." *Comparative Studies in Society and History* 22(2): 145-155.
- Hammersley, M. (2000). *Taking Sides in Social Research - essays on partisanship and bias*. London, Routledge.
- Hammersley, M. and P. Atkinson (1983). *Ethnography: principles in practice*. London, Tavistock.
- Hannum, E. and Y. Xie (1998). "Ethnic Stratification in Northwest China: Occupational Differences between Han Chinese and National Minorities in Xinjiang, 1982-1990." *Demography* 35(3): 323-333.
- Hanson, S. and G. Pratt (1995). *Gender, Work, and Space*. London, Routledge.
- Hardie, I. and D. MacKenzie (2006). *Assembling an Economic Actor: The Agencement of a Hedge Fund. New Actors in a Financialised Economy and Implications for Varieties of Capitalism*. London, Institute of Commonwealth Studies.
- Hardie, I. and D. MacKenzie. (2006, Nov). "Constructing the Market Frame: Distributed Cognition and Distributed Framing in Financial Markets." from <http://www.sociology.ed.ac.uk/finance/Papers/NPE4.doc>.
- Hart, O. and J. Moore (1996). "The Governance of Exchanges: Members' Cooperatives versus Outside Ownership." *Oxford Review of Economic Policy* 12(4): 53-69.
- Harvey, D. (2005). *A Brief History of Neoliberalism*. Oxford, Oxford University Press.
- Hatherly, D., D. Leung, D. MacKenzie (2005) "The Finitist Accountant: Classifications, Rules and the Construction of Profits." http://www.sps.ed.ac.uk/__data/assets/pdf_file/0011/3422/The_Finitist_Accountant.pdf
- Hawkesworth, M. (1997). "Confounding Gender." *Signs* 22(3): 649-685.

- He, J. 何., Q. 孫. Suen, et al. (2005). "An Analysis of the Motivation for Future Exchanges to Demutualize, from Environmental Perspectives (從環境角度分析期貨交易所非互助化改造的動因)." *Nankai Economic Studies* (南開經濟研究) 2005(5): 80-87.
- Hertz, E. (1998). *The Trading Crowd: an Ethnography of the Shanghai Stock Market*. Cambridge, Cambridge University Press.
- Hertz, E. and V.-A. Lépinay (2004). *Markets-in-law: Legal outeractionism in securities markets. Inside and Outside Markets conference*. Ecole des Mines, Paris.
- Ho, P.-T. (1954). "The Salt Merchants of Yang Chou - a study of commercial capitalism in eighteenth century China." *Harvard Journal of Asiatic Studies* 17(1/2): 130-169.
- Holm, P. (2007). *Which Way is Up on Callon? Do Economists Make Markets?* D. MacKenzie, F. Muniesa and L. Siu. Princeton, Princeton University Press: 225-243.
- Hong, J. (2007). *Unbalanced Interests: Have Futures Companies become Workers for the Exchanges? (利益不均衡 期貨公司已經淪為交易所的打工仔?)*. *Diyi Caijing ReBao* (第一財經日報).
- Huang, S.-m. (1997). "Review. China's Motor: A Thousand Years of Petty Capitalism." *The China Journal* 37: 117-120.
- Huang, Z. (2001). 中國期貨市場風險回顧之五：蘇州「紅小豆 602 事件」。中國期貨市場風險回顧, Hexun Wang 和讯網。
- Hughes, King, et al. (1994). *Moving out from the Control Room: Ethnography in System Design*, Lancaster University: CSCW Research Centre.
- Hull, J. (2000). *Options, Futures, and Other Derivatives*. London, Prentice Hall International.
- Huntsman, J. (2003). "Raymond Firth (1901-2002)." *American Anthropologist* 105(2): 487-490.
- Hutchins, E. (1995). *Cognition in the Wild*. Cambridge, Mass. ; London, MIT Press.
- Iwai, K. (1996). "The Bootstrap Theory of Money: a Search-theoretic Foundation of Monetary Economics." *Structural Change and Economic Dynamics* 7: 451-477.
- Ju, W. (2006). *On Sustainable Development Strategies of China's Futures Markets*. *Futures Daily*. Zhengzhou.
- Kane, E. W. and L. J. Macaulay (1993). "Interviewer Gender and Gender Attitudes." *The Public Opinion Quarterly* 57(1): 1-28.
- Kapp, R. A. (1980). "Introduction: Review Symposium on Edward Said's Orientalism." *Journal of Asian Studies* 39(3): 481-484.
- Ke, B. (1991). "Price Problems in China's Grain Market." *Chinese Rural Economy* 6/1991(78).
- Ke, B. (1992). "Price Signals in China's Grain Market." *Chinese Rural Economy* 6/1992(90).
- Kelly, R. M. (1991). *The Gendered Economy: Work, Careers and Success*. Newbury Park, Calif. ; London, Sage.

- Kent, Williamson, et al. (2002). "Social Science Gets the Ethics Treatment: Research governance and ethical review." *Sociological Research Online* 7(4).
- King, L. P. (2007). "Does Neoliberalism Work? Comparing Economic and Sociological Explanations of Postcommunist Performance." *Economic Sociology: the European Electronic Newsletter* 8(2): 10-17.
- King, L. P. and I. Szelenyi (2005). *Post-Communist Economic Systems. The Handbook of Economic Sociology*. N. Smelser and R. Swedberg. New York, Princeton University Press.
- Klamer, A. L., Thomas C (1994). *So what's an economic metaphor? Natural Images in Economic Thought - markets read in tooth and claw*. P. Mirowski. Cambridge, Cambridge University Press.
- Knorr Cetina, K. and U. Brügger (2002). "Global Microstructures: The Virtual Societies of Financial Markets." *American Journal of Sociology* 107(4): 905-950.
- Knorr Cetina, K. and A. Preda, Eds. (2005). *The Sociology of Financial Markets*. Oxford, Oxford University Press.
- Knorr-Cetina, K. (2003). "From Pipes to Scopes: The Flow Architecture of Financial Markets." *Journal Distinktion* 7 (Special Issue on Economic Sociology).
- Knorr-Cetina, K. D. (1999). *Epistemic Cultures: How the Sciences Make Knowledge*. Cambridge, Mass. ; London, Harvard University Press.
- Knox, H., M. Savage, et al. (2006). "Social Networks and the Study of Relations: Networks as Method, Metaphor and Form." *Economy and Society* 35(1): 113-140.
- Koppel, M. (1998). *Women of the Pits: Shattering the Glass Ceiling in Financial Markets*. Chicago, Ill., Dearborn Financial Publishing.
- Kramer, G. H. (1983). "The Ecological Fallacy Revisited: Aggregate - versus Individual-level Findings on Economics and Elections, and Sociotropic Voting." *American Political Science Review* 77.
- Kreps, D. M. (2000). *Transaction Cost Economics and the Firm*.
- Krippner, G., M. Granovetter, et al. (2004). "Polanyi Symposium: a Conversation on Embeddedness." *Socio-Economic Review* 2: 109-135.
- Kynaston, D. (1997). *LIFFE: A Market and its Makers*. Cambridge, Granta.
- Ladany, L. (1992). *Law and Legality in China - the Testament of a China-watcher*. London, Hurst & Company.
- Lam, B. L. (2002). 公共政策的事實與謊言之泡沫與失誤. Hong Kong, ATNext.
- Lang, H.-P. 郎. (2005). *The Collapse of Li and Traditional Order: China in Dire Need of Harmonisation 禮崩樂壞：中國亟待和諧化*. Asia Weekly 亞洲周刊. 19 (48): 36-39.
- Lardy, N. (1998). *China's Unfinished Economic Revolution*. Washington D.C., Brookings Institution Press.

- Latour, B. (1987). *Science in Action*. Cambridge, MA, Harvard University Press.
- Latour, B. (1987). *Science in Action. How to Follow Scientists and Engineers through Society*. Cambridge Mass, Harvard University Press.
- Latour, B. and S. Woolgar (1986). *Laboratory Life: The Construction of Scientific Facts*. Princeton, NJ, Princeton University Press.
- Le, X. 樂. (2006). 中金所人事初定 朱玉辰任總裁宋安平任第一副總裁. 21st Century Economic Review (21 世紀經濟報道). Guangzhou.
- LeClair, E. E., Jr. (1962). "Economic Theory and Economic Anthropology." *American Anthropologist* 64: 1179-1203.
- Lei, W. Y. (1981). *Soy Trade in the Northeast (1907 - 1931) (東北的豆貨貿易)*. Bulletin of Historical Research: 7. Taiwan: Taipei, National Taiwan Normal University. MA.
- Lepinay, V.-A. (2002). *Finance as Circulating Formulas*. Presented at the Columbia conference, May 3-4 2002.
- Lerner, J. (2002). "Where does State Street Lead? A First Look at Financial Patents, 1971 to 2000." *Journal of Finance* 57: 901-930.
- Leslie, J. and G. Wyatt (1992). *Futures and Options. Markets and Dealers: The Economics of the London Financial Markets*. D. Cobham. Harlow, Essex, Longman: 85-110.
- Levin, P. (2001). "Gendering the Market: Temporality, Work, and Gender on a National Futures Exchange." *Work and Occupations* 28(1): 112-130.
- Lewis, M. (1990). *Liar's Poker: Rising through the Wreckage on Wall Street*. New York, N.Y. ; London, Penguin Books.
- Li, B. 李. (2004). *The Broken Wings of Guan Jinsheng, the King of Securities 折翼的「證券之王」管金生*. 環球企業家. 100.
- Liang, S. 梁. (1949). *Essential Meanings of Chinese Culture (中國文化要義)*. Chengdu, Lu Ming Shudian.
- Lie, J. (1991). "Embedding Polanyi's Market Society." *Sociological Perspectives* 34(2): 219-235.
- Lie, J. (1997). "Sociology of Markets." *Annual Review of Sociology* 23: 341-360.
- Liebenberg, L. (2002). *The Electronic Financial Markets of the Future: and Survival Strategies of the Broker-Dealers*. Hampshire, Palgrave Macmillan.
- Liew, L. (1997). *The Chinese Economy in Transition: from Plan to Market*. Cheltenham, Edward Elgar.
- Lin, D. 林. (2000). *The Legal-historical Studies of Qu Tongzu and Dai Yanhui: an Investigation from the Sociology of Knowledge 瞿同祖與戴炎輝的法史學：知識社會學的考察*. 當代. 153: 86-101.
- LiPuma, E. and B. Lee (2004). *Financial Derivatives and the Globalization of Risk*. Durham, NC, Duke University Press.

- LiPuma, E. and B. Lee (2005). "Financial Derivatives and the Rise of Circulation." *Economy and Society* 34: 404-427.
- Liu, J. and F. Yan (1999). *The Epoch of Futures Markets (期市風雲錄)*. Beijing, China Finance and Economics Publishing (中國財政經濟出版社).
- Liu, X. (1991). "Price Problem in China Agricultural Growth." *China Rural Economy* (11/1991).
- Liu, Y. (2006). *Futures Museum Opens in Shanghai*. Shanghai Securities Post. Shanghai.
- Liu, Z. (2007). *The Financial Unrest Caused by the Excess of Trust Companies and Stock Exchanges and the Management of the Chinese Stock Market in Modern Shanghai 「信交風潮」與近代上海華商證券市場的管理*, CENET.
- Lou, W. 羅. (2007). 56% Volume Increase in Futures Markets 2006; Profit Margins not Optimistic (去年全國期市成交額增 56% 盈利水準並不樂觀). 第一財經日報.
- Luethje, B. (2004) "Global Production Networks and Industrial Upgrading in China: The Case in Electronics Contract Manufacturing." *Economics Study Area Working Papers* 74. East-West Center, Economics Study Area.
- Luo, W. (2005). *Market Making: the Strange Mutation of Chinese Futures*. First Economic Daily (Diyi Caijing Ribao). Shanghai.
- Ma, Z. 馬. and Y. 孟. Meng (2005). *The Fusion of Global Markets and the Fate of Traditional Chinese Industries: Money Houses of Shanghai in 1910-1933 (世界市場的融合與中國傳統產業的命運: 以 1910-1933 年的上海錢莊為例)*. *Economy of the Republic of China in World Economy 世界經濟體制下的民國時期經濟*. D. 張. Zhang, 朱蔭貴, 趙津 and 張利民. Beijing, 中國財政經濟出版社: 138-145.
- Macfarlane, A. (1987). *The Culture of Capitalism*. Oxford, Basil Blackwell.
- Mackay, C. (2002). *Extraordinary Popular Delusions and the Madness of Crowds*. New York, MetroBooks.
- MacKenzie, D. (2001). "Physics and Finance: S-Terms and Modern Finance as a Topic for Science Studies." *Science, Technology, & Human Values* 26(2): 115-144.
- MacKenzie, D. (2006). *An Engine, not a Camera: How Financial Models Shape Markets*. Cambridge, MIT.
- MacKenzie, D. (2007). *Is Economics Performative? Option Theory and the Construction of Derivatives Markets. Do Economists Make Markets?* D. MacKenzie, F. Muniesa and L. Siu, Princeton.
- MacKenzie, D. and Y. Millo (2003). "Constructing a Market, Performing Theory: the Historical Sociology of a Financial Derivatives Exchange." *American Journal of Sociology* 109: 107-145.
- Mackenzie, D., F. Muniesa, et al. (2007). *Do economists make markets? :on the performativity of economics*. Princeton, N.J.; Oxford, Princeton University Press.

- Malinowski, B. (1922). *Argonauts of the Western Pacific: an Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea*. London, G. Routledge & sons, ltd.
- Martin, P. Y. (2006). "Practising Gender at Work: Further Thoughts on Reflexivity." *Gender, Work and Organization* 13(3): 256-275.
- Marx, K. (1946[1887]). *Capital: a Critical Analysis of Capitalist Production*. London, Swan Sonnenschein, Lowrey & Co.
- Mason, W. (1999). *Rate Setting in London, British Bankers Association*, typescript.
- Maurer, B. (2001). "Engineering an Islamic Future: Speculations on Islamic Financial Alternatives." *Anthropology Today* 17/1: 8-11.
- Maurer, B. (2002). "Repressed Futures: Financial Derivatives' Theological Unconscious." *Economy and Society* 31: 15-36.
- Maurer, B. (2005). *Mutual Life, Limited: Islamic Banking, Alternative Currencies, Lateral Reason*. Princeton, NJ, Princeton University Press.
- Mauss, M. (1970). *The Gift: Forms and Functions of Exchange in Archiac Societies*. London : Routledge & Kegan Paul.
- McPherson, M. and M. E. Brashears (2006). "Social Isolation in America: Changes in Core Discussion Networks over Two Decades." *American sociological Review* 71: 353-375.
- Melamed, L. and B. Tamarkin (1996). *Leo Melamed: Escape to the Futures*. New York, Wiley.
- Merges, R. P. (2000). "One Hundred Years of Solicitude: Intellectual Property Law 1900-2000." *California Law Review* 88: 2187-2240.
- Merton, R. K. (1948). "The Self-fulfilling Prophecy." *the Antioch Review* []: 193-210.
- Merton, R. K. (1972). "Insiders and Outsides: a Chapter in the Sociology of Knowledge." *The American Journal of Sociology* 78 [1]: 9-47.
- Mihevci, J. and Third World Network. (1995). *The Market Tells Them So: the World Bank and Economic Fundamentalism in Africa*. London, Penang, Malaysia, Zed Books: Third World Network.
- Miller, D. (1997). *Capitalism: an Ethnographic Approach*. Oxford, Berg.
- Miller, D. (1998). *Conclusion: A Theory of Virtualism. Virtualism: A New Political Economy*. J. G. Carrier and D. Miller. Oxford, Berg: 187-215.
- Miller, D. (2002). "Turning Callon the Right Way Up." *Economy and Society* 31(2): 218-233.
- Miller, N. C. (1965). *The Great Salad Oil Wwindle - The Story of Tim de Angelis*. Baltimore, Penguin.
- Millo, Y., F. Muniesa, et al. (2005). "Organized Detachment: Clearinghouse Mechanisms in Financial Markets." *Information and Organization* 15: 229-246.

- Mirowski, P. (1989). *More Heat than Light: Economics as Social Physics: Physics as Nature's Economics*. Cambridge, Cambridge University Press.
- Mirowski, P. (2002). *Machine Dreams: Economics becomes a Cyborg Science*. Cambridge, Cambridge University Press.
- Mirowski, P. and E. Nik-Khah (2007). *Markets Made Flesh: Performativity, and a Problem in Science Studies, Augmented with Consideration of the FCC Auctions. Do Economists Make Markets?* D. MacKenzie, F. Muniesa and L. Siu. Princeton, Princeton University Press: 190-224.
- Mitchell, T. (2007). *The Properties of Markets. Do Economists Make Markets?* D. MacKenzie, F. Muniesa and L. Siu. Princeton, Princeton University Press: 244-275.
- Miyazaki, H. (2007). "Between Arbitrage and Speculation: an Economy of Belief and Doubt." *Economy and Society* 36(3): 396- 415.
- Mulvey, L. (1975). "Visual Pleasure and Narrative Cinema." *Screen* 16(3): 6-18.
- Muniesa, f. and M. Callon (2007). *Economic Experiments and the Construction of markets. Do Economists Make Markets?* D. MacKenzie, F. Muniesa and L. Siu. Princeton, Princeton University Press: 163-189.
- Murphy, J. J. (1994). *Technical Analysis of the Futures Markets: A Comprehensive Guide to Trading Methods and Applications*. Beijing, Earthquake.
- Nee, V. (1983). *Between Center and Locality: State, Militia, and Village. State and Society and Contemporary China*. V. Nee and D. Mazingo. Ithaca, Cornell University Press.
- Nee, V. (1989). "A Theory of Market Transition: From Redistribution to Markets in State Socialism." *American Sociological Review* 54: 663-681.
- Nee, V. (1994). "Review: From the Soil." *Contemporary Sociology* 23(5): 764-765
- Nee, V. (1996). "Symposium on Market Transition." *American Journal of Sociology* 101: 908-1096.
- Nee, V. (2005). *Politicized Capitalism in China. The Economic Sociology of Capitalism*. V. Nee and R. Swedberg. Princeton, Princeton University Press.
- Nee, V. and D. Mazingo (1983). *State and Society in Contemporary China*. Ithaca, N.Y. ; London, Cornell University Press.
- Nee, V. and R. Swedberg (2005). *The Economic Sociology of Capitalism*. New Jersey, Princeton University Press.
- Neftci, S. N. and M. Y. Menager-Xu (2006). *China's Financial Markets: an Insider Guide to How the Markets work*. London, Elsevier.
- Newbery, D. M. G. and J. E. Stiglitz (1981). *The Theory of Commodity Price Stabilization: a Study in the Economics of Risk*. Oxford, Clarendon.
- North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge, Cambridge University Press.

- NSF (2004). Interpreting the Common Rule for the Protection of Human Subjects for Behavioral and Social Science Research, National Science Foundation.
- O'Brien, R. (1992). *Global Financial Integration: The End of Geography*. London, Pinter.
- Oi, J. C. (1986). "Peasant Grain Marketing and State Procurement: China's Grain Contracting System." *China Quarterly*: 272-90.
- Oi, J. C. and A. G. Walder (1999). *Property Rights and Economic Reform in China*. Stanford, Calif., Stanford University Press.
- Oksenberg, M. (2001). "China's Political System: Challenges of the Twenty-First Century." *The China Journal*(45): 21-35.
- O'Leary, G. (1998). *Adjusting to Capitalism: Chinese Workers and the State*. Armonk, N.Y. ; London, M.E. Sharpe.
- Ong, A. (1999). *Flexible Citizenship: the Cultural Logics of Transnationality*. Durham [N.C.] ; London, Duke University Press.
- Ostrom, E. (2000). "Collective Action and the Evolution of Social Norms." *Journal of economic perspectives* 14: 137-158.
- Ouyang, R. (2006). *China's Futures Markets: Analysis on the System of Development 中國期貨市場發展的制度分析*. Chongqing, Chongqing Publishing.
- Pang, Y. and Y. Tang (2007). *Reform of Shiye Danwei in China: Return to Public Services*. Outlook Weekly (瞭望新聞周刊).
- Parish, W. L. and E. Michelson (1996). "Politics and Markets: Dual Transformations." *The American Journal of Sociology* 101(4): 1042-1059.
- Partnoy, F. (2004). *A Man's Game in Need of Women*. Financial Times.
- Patel, K. (1994). "Lessons from the FOX Residential Property Futures and Mortgage Interest Rate Futures Market." *Housing Policy Debate* 5: 343-360.
- Payne, G. (1996). *Imagining the Community: Some Reflections on the Community Study as a Method*. Methodological Imaginations L. Busfield. Hampshire, MacMillan: 17-32.
- People's Bank of China (1960). *Historical Archives of Money Houses in Shanghai 上海錢莊史料*. Shanghai, Shanghai People's Publishing.
- Phillips, A. and B. Taylor (1980). "Sex and Skill: Notes towards a Feminist Economics." *Feminist Review* 6: 79-88.
- Pirrong, C. (2000). "A Theory of Financial Exchange Organization." *Journal of Law and Economics* 43(2): 437-471.
- Pitelis, C. (1993). *Transaction Costs, Markets and Hierarchies*. Oxford, Blackwell.
- Pixley, J. (2004). *Emotions in Finance: Distrust and Uncertainty in Global Markets*. Cambridge, Cambridge University Press.
- Podolny, J. M. (2001). "Networks as the Pipes and Prisms of the Market." *American Journal of Sociology* 107(1): 33-60.
- Polanyi, K. (1944). *The Great Transformation*. Boston, Beacon Press.

- Pomeranz, K. (1993). *The Making of a Hinterland: State, Society, and Economy in Inland North China, 1853-1937*. Berkeley ; Oxford, University of California Press.
- Prattis, J. I. (1982). "Synthesis, or a New Problematic in Economic Anthropology." *Theory and Society* 11(2): 205-228.
- Preda, A. (2002). *Financial Knowledge, Documents and the Structures of Financial Activities*.
- Preda, A. (2002). *On Ticks and Tapes: Financial Knowledge, Communicative Practices, and Information Technologies on 19th Century Financial Markets*.
- Preda, A. (2004). *Epistemic Performativity: The Case of Financial Chartism*. Workshop on Performativity of Economics, Paris.
- Preda, A. (2005). *The Stock Ticker. Making Things Public: Atmospheres of Democracy*. B. Latour and P. Weibel. Cambridge, Mass. ; [Karlsruhe, Germany], MIT Press : ZKM/Center for Art and Media in Karlsruhe: 622-627.
- Preda, A. (2007). *Where do Analysis Come From? The Case of Financial Chartism. Market Devices*. M. Callon, Y. Milla and F. Muniesa. Oxford, Blackwell.
- Pryke, M. and J. Allen (2000). "Monetized Time-Space: Derivatives - Money's "New Imaginary"?" *Economy and Society* 29: 264-84.
- Qian, M.-Y., S.-Z. Gao, et al. (1992). *Research on Futures and Wholesale Markets 期貨批發市場研究* (collection of official documents and government reports concerning the futures markets from 1987-1992). Zhengzhou, Henan People's Publishing.
- Qu, T. 瞿同祖. (2003 [1947]). *Law and Society in Traditional China 中國法律與中國社會*. Beijing, Zhonghua.
- Qu, T. 瞿同祖. and *École pratique des hautes études* (France). Section des sciences économiques et sociales. (1961). *Law and Society in Traditional China*. Paris, Mouton.
- Quinones, S. (2007). *L.A. Gang Members Go Union*. Los Angeles Times. Los Angeles.
- Ran, X. (1995). "Certain Issues on China's Futures Legislature in Economic Law of China." 5(5): 81.
- Ranson, G. and W. J. Reeves (1996). "Gender, Earnings, and Proportions of Women: Lessons from a High-Tech Occupation." *Gender and Society* 10(2): 168-184.
- Renminbao (2002). 江澤民大提黃麗滿 薄熙來小升姜麗華. Renminbao. 2006.
- Richards, A. (2004). *Big Fish in Small Ponds: The Trading Behaviour and Price Impact of Foreign Investors in Asian Emerging Equity Markets*, Reserve Bank of Australia.
- Robson, C. (1993). *Real World Research: a Resource for Social Scientists and Practitioner-Researchers*. Oxford, Blackwell: Chapter 4, 13 & 14.
- Róna-Tas, Á. (1994). "The First Shall Be Last? Entrepreneurship and Communist Cadres in the Transition from Socialism." *American Journal of Sociology* 100: 40-69.

- Roscoe, P. and C. Howorth (2007). Identification through Technical Analysis: A Study of the Investment Behaviour of UK Non-professional Investors, Lancaster University Management School.
- Rose, N. and P. Miller (1992). "Political Power beyond the State: Problematics of Government." *The British Journal of Sociology* 43(2): 173-205.
- Roseman, S. R. (2002). "'Strong Women' and 'Pretty Girls': Self-Provisioning, gender, and Class Identity in Rural Galicia (Spain)." *American Anthropologist* 104(1): 22-37.
- Ruef, M. (1999). "Making Markets: Opportunism and Restraint on Wall Street. - Review - " *Administrative Science Quarterly*.
- Ruskola, T. (2002). "Legal Orientalism." *Michigan Law Review* 101(1): 179-234.
- Ruspini, E. (2002). "Longitudinal Research in the Social Sciences." *Social Research Update* 28.
- Said, E. W. (1985). *Orientalism: Western Concepts of the Orient*. Harmondsworth, Penguin.
- Sandor, R. L. and H. B. Sosin (1983). Inventive Activity in Futures Markets: A Case Study of the Development of the First Interest Rate Futures Market. *Futures Markets: Modeling, Managing and Monitoring Futures Trading*. M. E. Streit. Oxford, Blackwell: 255-272.
- Schubert, R., M. Brown, et al. (1999). "Financial Decision-Making: Are Women Really More Risk-Averse?" *The American Economic Review* 89(2): 381-385.
- SCMP (1996). *National Laws Key to Futures Sector*. South China Morning Post. Hong Kong.
- Scott, J. (2000). *Social Network Analysis: a Handbook*. London, SAGE Publications.
- Securities and Futures Research Centre, Z. U. (2005). *A Comparison between the Models of Domestic and Overseas Futures Companies*. Jingji Daokan. 2005.
- Shadbolt, J. and J. G. Taylor (2002). *Neural Networks and the Financial Markets: Predicting, combining, and Portfolio Optimisation*. London, Springer.
- Shefrin, H. (2000). *Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing*. Boston, Harvard Business School Press.
- Shen, K. 沈. (2003). *China's Futures Markets: operation and development 中國期貨市場運行與發展*. Shanghai, Xuelin.
- Shepard, L. (1975). *The Securities Brokerage Industry*. Lexington, Lexington Books.
- SHFE (2005). *Analysis on Controversies on Steel Futures 對鋼材期貨幾個有爭議問題的分析*. Shanghai, Steel Futures Group, Shanghai Futures Exchange (SHFE) 上海期貨交易所鋼材期貨小組.
- SHFE (2005). *Problems to be Resolved before Re-launching Steel Futures 鋼材期貨上市需要解決的幾個問題*. Shanghai, Development and

- Research Center, Shanghai Futures Exchange (SHFE) 上海期貨交易所發展研究中心.
- Shleifer, A. (2000). "Inefficient Markets: an Introduction to Behavioral Finance." from <http://www.oxfordscholarship.com/oso/public/content/economicsfinance/0198292279/toc.html>
- SHUFE, 上. (2005). Industrial Organization of China's Futures Industry 2005 (2005 中國期貨業產業組織分析). Shanghai, Shanghai University of Finance and Economics 上海財經大學出版社.
- Sigley, G. (2006). "Chinese Governmentalities: Government, Governance and the Socialist Market Economy." *Economy and Society* 35(4): 487-508.
- Silber, W. L. (1981). "Innovations, Competition, and New Contract Design in Futures Markets." *Journal of Futures Markets* 1: 123-155.
- Silverman, D. (1993). *Interpreting Qualitative Research: Methods for Analysing Talk, Text and Interaction*. London, Sage: Chapters 3, 4 & 10.
- Simmel, G. (1990). *Philosophy of Money*. London, Routledge.
- Simpson, B. and M. W. Macy (2004). "Power, Identity, and Collective Action in Social Exchange." *Social Forces* 82(4): 1373-1409.
- Siu, L. (2002). *Swarm, Pheromone, Shadow and Guerilla: Clashing Rationalities in the Dotcom Bubble*. Science and Technology Studies. Edinburgh, University of Edinburgh. MSc
- Smart, A. (1993). "Gifts, Bribes, and Guanxi: A Reconsideration of Bourdieu's Social Capital." *Cultural Anthropology* 8(3): 388-408.
- Smart, A. (1997). *Oriental Despotism and Sugar-Coated Bullets - Representations of the Markets in China. Meanings of the market : the Free Market in western culture*. J. G. Carrier. Oxford, Berg: xvii, 276p.
- Smart, A. (1999). "Review: The Trading Crowd: An Ethnography of the Shanghai Stock Market." *American Ethnologist* 26(2): 481-482.
- Smidt, S. (1968). "A New Look at the Random Walk Hypothesis." *The Journal of Financial and Quantitative Analysis* 3(3): 235-261.
- Solinger, D. J. (1983). *Marxism and the Market in Socialist China: The Reforms of 1979-1980 in Context. State and Society in Contemporary China*. V. Nee and D. Mozingo. Ithaca, Cornell University Press.
- Song, K. 宋. (2002). *The Heated War of Futures Commission Fees -- How Much is Appropriate? (期貨手續費之爭愈演愈烈- 手續費多少才合適?)*. Beijing Business Today 北京現代商報.
- Sørensen, K. H. and R. Williams, Eds. (2002). *Shaping Technology, Guiding Policy: Concepts, Spaces and Tools*. Cheltenham, Glos., Elgar.
- Soto, H. d. (2001). *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. London, Black Swan.
- SRA (2003). *Ethical Guidelines 2003*, Social Research Association.

- Steen, D. (1982). "How Traded Options Started." *Money Observer* 27 April.
- Suen, H.-M., G.-H. Zhu, et al. (2005). Analysis of the Sectoral Organization of China's Futures Industry 2005 (2005 中國期貨業的產業組織分析). Shanghai, Shanghai University of Finance and Economics.
- Suen, S.-Q. (1994). Report on the Development of Chinese Markets 中國市場發展報告, China Development Publishing.
- Swan, E. J. (2000). Building the Global Market: A 4000 Year History of Derivatives. London, Kluwer.
- Swedberg, R. (1987). "The Paradigm of Economic Sociology: Premises and Promises." *Theory and Society* 16(2): 169-213.
- Swedberg, R. (2003). "Bourdieu's Advocacy of the Concept of Interest and its Role in Economic Sociology." *Economic Sociology European Electronic Newsletter* 4(2).
- Szelényi, I. and E. Kostello (1996). "The Market Transition Debate: Toward a Synthesis?" *The American Journal of Sociology* 101(4): 1082-1096.
- Tamarkin, B. (1993). The Merc: The Emergence of a Global Financial Powerhouse. New York, HarperCollins.
- Tao, M. 涂. (2005). Beijing Car Sales Reaching New Heights in the First Half of the Year 上半年北京汽車銷量創歷史新高. 新京報. Beijing.
- Telser, L. (2000). Classic Futures: Lessons from the Past for the Electronic Age. London, Risk Books.
- Teweles, R. J. and F. J. Jones (1999). Approaches to Trade Selection: Technical Analysis. The Futures Game: Who Wins? Who Loses? And Why? B. Warwick. New York, McGraw-Hill: 154-190.
- Thompson, P. (1997). "The Pyrrhic Victory of Gentlemanly Capitalism: The Financial Elite of the City of London, 1945-90." *Journal of Contemporary History* 32: 283-304 and 427-440.
- Thrift, N. (2000). Pandora's Box? Cultural Geographies of Economics. Oxford Handbook of Economic Geography. G. L. Clark, M. S. Gertler and M. P. Feldman. Oxford, Oxford University Press: 689-704.
- Tickell, A. (1998). "Unstable Futures: Controlling and Creating Risks in International Money." *Socialist Register*: 248-277.
- Tickell, A. (2000). "Dangerous Derivatives: Controlling and Creating Risks in International Money." *Geoforum* 31: 87-00.
- Tim@OrangeDays (2007) "An Idea a Day: Develop a Bubble Index." Volume
- Tufano, P. (1989). "Financial Innovation and First-Mover Advantages." *Journal of Financial Economics* 25: 213-240.
- Tufano, P. (2003). Financial Innovation. Handbook of the Economics of Finance, vol. 1A: Corporate Finance. G. M. Constantinides, M. Harris and R. M. Stulz. Amsterdam, Elsevier: 307-335.
- Velthuis, O. (1999). "The Changing Relationship between Economic Sociology and Institutional Economics: From Talcott Parsons to

- Mark Granovetter." *American Journal of Economics and Sociology* 58(4): 629-649.
- Verheul, I. and R. Thurik (2001). "Start-Up Capital: "Does Gender Matter?"" *Small Business Economics* 16: 329-345.
- Vintcent, C. (2002). *How to Win at Financial Spread Betting*. London, Pearson.
- Walder, A. G. (1986). *Communist neo-traditionalism: work and authority in Chinese society*. Berkeley, University of California Press.
- Walder, A. G., American Council of Learned Societies. Committee on Chinese Studies., et al. (1995). *The Waning of the Communist State: Economic Origins of Political Decline in China and Hungary*. Berkeley ; London, University of California Press.
- Wang, J. (2001). 中國期貨市場風險回顧之十：天然橡膠 R708 事件. 中國期貨市場風險回顧, Hexun Wang 和訊網.
- Wang, J. and L. Wang (2001). 中國期貨市場風險回顧之三：海南棕櫚油 M506 事件. 中國期貨市場風險回顧, Hexun Wang 和訊網.
- Wang, J., X. Wang, et al. (2001). *China Futures Risk Review Series*, Hexun.com.
- Wang, X. (2001). 中國期貨市場風險回顧之七：廣聯豆粕系列逼倉事件. 中國期貨市場風險回顧, Hexun Wang 和訊網.
- Wang, X. (2001). 中國期貨市場風險回顧之九：大連玉米 C511 事件. 中國期貨市場風險回顧, Hexun Wang 和訊網.
- Wang, X. (2001). 中國期貨市場風險回顧之六：膠板 9607 事件. 中國期貨市場風險回顧, Hexun Wang 和訊網.
- Wank, D. (2000). "Review: The Trading Crowd: An Ethnography of the Shanghai Stock Market." *Contemporary Sociology* 29(2): 374-376.
- Wank, D. L. (1999). *Commodifying Communism: Business, Trust, and Politics in a Chinese City*. Cambridge, Cambridge University Press.
- Wank, D. L. (2002). *Business-State Clientelism in China: Decline or Evolution? Social Connections in China: Institutions, Culture, and the Changing Nature of Guanxi*. T. Gold, D. Guthrie and D. L. Wank. Cambridge, Cambridge University Press: 97-115.
- Weber, M. (1968). *The Prophet. Economy and Society*. New York, Bedminster
2: 439-451.
- Weber, M. (2001 [1958]). *The Protestant Ethic and the Spirit of Capitalism*. London ; New York, Routledge.
- Weber, M. and H. H. Gerth (1951). *The Religion of China : Confucianism and Taoism*. Glencoe, Ill., Free Press.
- Whyte, W. F. (1955). *Street Corner Society*. Chicago, University of Chicago Press.

- Williamson, O. E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications; a Study in the Economics of Internal Organization*. New York, Free Press.
- Winner, L. (1993). "Upon Opening the Black Box and Finding It Empty: Social Constructivism and the Philosophy of Technology." *Science, Technology & Human Values* 18 (de Long, Shleifer et al.): 362-378.
- Witte, E. E. (1954). "Institutional Economics as Seen by an Institutional Economist." *Southern Economic Journal* 21(2): 131-140.
- World-Bank (1994). *China's Distinctive Pattern of Development of Commodity Exchanges*. China: Internal Market Development and Regulation. Washington D.C., World Bank.
- Wu, Q. and X. Jiang (2003). *Civil Responsibilities in Futures Trading: Explaining, Elaborating and Launching the Legislation for Futures*. Beijing, China Legislation Publishing
- Wu, X. 吳. (2006). *Misalignment between Law and Offence: the Situation Faced by Former Entrepreneurs (法罪錯位：落馬企業家的困境)*. 法人.
- Xia, L. 夏. (2006). 范福春寄語期貨業：擺脫一管就死一放就亂的怪圈. 中國證券報.
- Xiao, C. and Q. Li (2006). *How Overseas Securities Companies Participate in Financial Futures Markets*
- 海外证券公司参与金融期货模式的借鉴. *Futures Daily*. Zhengzhou.
- Xiao, Q. (1986). "An Introduction to the "1921 Incident" in the Financial Industry of Shanghai 上海金融界「民十風潮」述略." *近代史研究* 1986(2).
- Xie, Y. and E. Hannum (1996). "Regional Variation in Earnings Inequality in Reform-Era Urban China." *The American Journal of Sociology* 101(4): 950-992
- Xu, H. (2001). 中國期貨市場風險回顧之一：上海粳米事件. 中國期貨市場風險回顧, Hexun Wang 和讯網.
- Xu, H. (2001). 中國期貨市場風險回顧之四：反思廣聯「糯米事件」. 中國期貨市場風險回顧, Hexun Wang 和讯網.
- Xu, L. 徐莉. (2004). *Who is the Sweepstaker - Novel on Futures in China (誰是贏家 -- 中國長篇期貨小說)*. Beijing, New World Press.
- Yan, Y. (2003). *Private Life under Socialism: Love, Intimacy, and Family Change in a Chinese Village, 1949-1999*. Stanford, Calif., Stanford University Press.
- Yang, M. M.-h. (1988). "The Modernity of Power in the Chinese Socialist Order." *Cultural Anthropology* 3(4): 408-427.
- Yang, M. M.-h. (1989). "The Gift Economy and State Power in China." *Comparative Studies in Society and History* 31(1): 25-54.
- Yang, M. M.-h. (1994). *Gifts, Favors, and Banquets: the art of social relationships in China*. Ithaca, Cornell University Press: 159-172, 287-311.

- Yang, Z.-B. and D.-G. Jin (2007). *Futures Markets of China: Analysis of 2006, Prospect of 2007*. X. Mao. Shanghai, Shanghai Futures Exchange.
- Yao, C. (1998). *Stock Market and Futures Market in the People's Republic of China*. Hong Kong, Oxford University Press.
- Yi, B. Z. and S. Lin (2001). "Regional Economic Development of the Northeast during the Nationalist Regime." *Regional Economic Development* 2001(2).
- Yi, Z. 易中天. (2005). *Atypical Corruption (非典型腐敗) The regrets of an empire - politics and human nature in traditional Chinese societies*. Shanghai, Wenhui: 147-188.
- Yuan, F. (1948). *Merchants under the Power of the Monarch (皇權下的商賈). Power of the Monarch, Power of the Gentry (皇權與紳權)*. X. Fei and X. Wu. Shanghai, Observation Society: 84-95.
- Yuan, F. (1948). *Merchants under Monarchical Powers. Power of the Monarch, Power of the Gentry*. X. Fei and X. Wu. Shanghai, Observation Society.
- Yuan, J. 袁. (2002). *Behind the Curtains of the Long-term Market Maker CEDTIC: Beaten by Greed and Over-confidence (走進長莊鼻祖「中經開」的幕後：被貪婪和自負擊倒)*. 《科學與財富之價值專刊》.
- Zaloom, C. (2003). "Ambiguous Numbers: Trading Technologies and Interpretation in Financial Markets." *American Ethnologist* 30(2): 258-272.
- Zaloom, C. (2006). *Out of the Pits: Trading and Technology from Chicago to London*. Chicago, Chicago University Press.
- Zelizer, V. (1994). *The Social Meaning of Money: Pin Money, Paychecks, Poor Relief, and Other Currencies*. Princeton, Princeton University Press.
- Zelizer, V. (2005). *Circuits within Capitalism. The Economic Sociology of Capitalism*. V. Nee and R. Swedberg. Princeton, Princeton University Press.
- Zelizer, V. (2005). *The Purchase of Intimacy*. Princeton, Princeton University Press.
- Zelizer, V. A. R. (1979). *Morals and Markets: the Development of Life Insurance in the United States*. New York, Columbia University Press.
- Zhang, C. 張春廷. (2001). "A Brief History of China's Securities Markets (republic period) 中國證券市場發展簡史(民國時期)." *證券市場導報* 89年5月(94期)-90年12月(113期)合訂本: 45-52P(8P).
- Zhang, J. 張瑾. (2001) "Review of the Tremour of "Event 327" (驚天動地 327 國債期貨回顧)." *牛股視點 Volume 4*, <http://www.nugoo.com/magazine/2001-11-15/ghgc.php>, accessed 15 May 2007.
- Zhang, L. (2001). *Strangers in the City: Reconfigurations of Space, Power, and Social Networks within China's Floating Population*. Stanford, Calif., Stanford University Press.

- Zhang, Q. and E. Zhao (1988). Building a Futures Market with Chinese Characteristics. China Commercial Daily. 23 July 1988.
- Zhang, Q. Q. 張群群. (2000). "Open Outcry, Member Monopoly and the Position of Nonprofit Organizations - on Traditional Futures Trading Mechanisms and Organisation Models (公開叫價、會員壟斷與非贏利組織地位——論期貨交易所傳統機制與組織形式的關係)." Research on Financial and Economic Issues (財經問題研究) 2000(10).
- Zhang, S. 章盛. (1979). The Truth about Hong Kong Triad Activities (香港黑社會活動真相). Hong Kong, 天地圖書.
- Zhang, Z. 張宗成., H. Tien 田洪., R. He 何仁科. (2001). "The Mechanisms and Regulatory Control of futures corner events 期貨逼倉機理及監控研究." Modern Economic Science 當代經濟科學 23(6): 77-82.
- Zhejiang University, Research Centre of Securities and Futures (2005). A Comparison between Domestic and Overseas Futures Companies in their Business Models and Capabilities. Jingji Daokan. 22 Aug 2005.
- Zhou, C. 周. and Q. 華. Hua (2003). 蘭生股份捲入空逼多天膠糾紛 涉案金額 5 億多. 全景網絡證券時報.
- Zhou, X. (2000). "Economic Transformation and Income Inequality in Urban China: Evidence from Panel Data." The American Journal of Sociology 105(4): 1135-1174.
- Zhou, Z. (2007). Shang Fulin: Insisting on the Perspective of Scientific Development to Provide Guidance for the Capital Markets 尚福林:堅持以科學發展觀指導資本市場. 上海證券報. Shanghai.
- Zhu, G.-m. 朱國明. (2007). "The Competition of Management Rights between Two Stock Exchanges in Shanghai in 1920s 舊上海兩大交易所經營權之爭." Dang'an Chunqiu 檔案春秋 2007(1): 49-54.
- Zhu, H.-j. 朱紅軍. and D.-h. Rao 饒德宏. (2005). Offence in Economic Statistics Investigated; Small Town Falsified a 900-Million Bubble 中央查處經濟普查大案 小鎮擠出 9 億數字泡沫. Nanfang Zoumou 南方周末. Guangzhou: 9-10.
- Zhu, K.-d. 朱凱棟. (2006). Futures Industry Association - a Thickening Scent of Officials (期貨業協會官味漸濃). Securities Markets Weekly (證券市場周刊, Zhengzhuan Shichang Zhoukan).
- Zhu, Y.-g. 朱蔭貴. (2006). "China's Stock Market from 1918 to 1937 (1918-1937 年的中國證券市場)." Fudan Journal (Social sciences) 復旦學報(社會科學版) 2006(2): 74-85.
- Zhu, Y.-g. 朱蔭貴. (1998). "近代上海證券市場上股票買賣的三次高潮." 中國經濟史研究 1998(3).
- Zito, A. R. (1987). "City Gods, Filiality, and Hegemony in Late Imperial China." Modern China 13(3): 333-371.
- Zukin, S. and P. DeMaggio (1990). Structures of Capital: The Social Organization of the Economy Cambridge, Cambridge University Press: Chapters 1, 3 & 11.
- 中國經濟周刊 (2006). 期貨市場應服務於新農村建設. 中國經濟周刊. 11.

中國經濟網綜合 (2006) "期貨操盤手系列之二期貨市場形勢判斷."

中華工商時報 (2004). 期貨不單是投資工具 農民增收有賴於市場機制. 中華工商時報.

大連市史志辦公室. (2003-12-04). "大連史志網:婦聯." Retrieved 10 Aug 2006, 2006, from http://www.szb.dl.gov.cn/dlzz/004/631_9191.jsp.

大連開發區. (2006). "大連開發區中小企業信用擔保有限責任公司大事記."

Retrieved 10 August 2006, 2006, from
<http://www.ddzxb.com/dashiji.htm>.

富諾投資網. (2007). "期貨短線炒手成功秘訣——張文軍談經驗和短線操作技巧."

Retrieved 30 Sep 2007, 2007, from
<http://fjtct.now.cn:7751/www.funuo.com/newg/qhsj/xta/book08.html>.

東方博客 and 保證金. (2005). "刻骨銘心的十大期貨戰例." from

<http://blog.eastmoney.com/baozhenjin/17821.html>.

約翰·墨菲 (1994). 期貨市場技術分析. 北京, 地震出版社.

Appendix 1 List of Fieldwork Events

Internships

1. Exchange Q, Research Department, City Q, 1 Aug – 27 Aug 2005
2. A futures brokerage company in Beijing, 12 Sep – 20 Nov 2005

Training courses

1. Training course on commodity futures and options, Beijing, 21-22 May 2005
2. The “thousand village and ten-thousand household” project, city P, May – June 2005
3. The 2nd training course on futures knowledge, City P, 25-30 July 2005

Industry conferences

1. 2005 Forum on Risk Management in China’s Futures Markets, Beijing, 26 May 2005
2. 2005 China Financial Risk Management Conference, Beijing, 18-19 June 2005
3. The 1st China (Shenzhen) International Futures Forum, Shenzhen, 3-4 Dec 2005

Interviews

- B1, fund manager and futures trader
- B2, financial journalist
- B3, member of staff working in a county agricultural bureau
- C1, staff member of a futures exchange
- C2, trading floor representative
- C3, Webstock Ltd. (an information and software company)
- D, manager of a soybean farm
- F, researcher of a futures exchange
- G1, staff member of a futures exchange

G2, futures trader
G3, Webstock Ltd. (an information and software company)
K, executive of a futures company
L1, fund manager and futures trader
L2, former wheat farmer
L3, trading floor representative
L4, futures journalist
L5, futures analyst
L6, futures broker
M, analyst and chartist
R, executive of a futures company
S, futures trader
T1, member of staff of a futures exchange
T2, manager of a private investment fund
W1, member of staff of an industry association
W2, researcher of a futures exchange
W3, futures analyst
X1, academic in economics
X2, futures broker
Y, academic in finance
Z1, researcher in a national statistics unit
Z2, futures analyst
Z3, futures broker
Z4, futures broker
Z5, trading floor representative
Z6, executive of a futures company
Z7, research officer of a futures exchange

Appendix 2 Glossary

chartism	Also called technical analysis. Chartism is the use of graphical charts to forecast future price trends.
CFFEX	China Financial Futures Exchange (中國金融期貨交易所), a new futures exchange formed in 2007 for financial futures products.
CSRC	China Securities Regulatory Commission (中國證券監督管理委員會), the regulatory body of securities and futures markets of China.
commodity	The generic term means goods and services traded across a market without qualitative differentiation. In the futures markets, commodity futures products are non-financial futures products. Commodities are further categorized into agricultural products, metals, and energy products.
corner	To control a significant proportion of a particular commodity, and manipulate its price movements to obtain abnormal profits. When a party is exercising a corner plan, both spot and futures of the commodity can be involved.
DCE	Dalian Commodity Exchange (大連商品交易所)
delivery	To settle a futures contract by transferring the physical commodity from seller to buyer. The majority of markets traders would choose to settle their contracts by cash instead of physicals, but the delivery mechanism is important to maintain a close correlation between the futures price and the underlying commodity. Delivery is carried out after the contract expires under conditions specified by the futures contract, such as the timing of delivery, and the use of designated warehouses.

forward	A contract made between two parties to buy or sell an asset in a pre-agreed time in the future. The contract terms are custom-made between the two parties involved.
future	A standardized contract to buy or sell an asset in a pre-agreed time in the future. A futures contract is issued by a futures exchange, which has specified the terms of the standardized contract. Futures contracts are traded on a futures exchange.
hedging	To reduce or cancel out the risk of one investment item, by taking on another investment item. Businesses involved in the production or consumption of a commodity in their daily business can hedge their business risks by the use of commodity futures.
margin	A margin is the cash or collateral a futures trader places in one's account, to cover for the credit risk of unsettled futures contracts held by the trader. The margin of China's futures markets usually lies between 5-15% of the total value of futures contracts held.
position	The committed status to buy or sell a given asset. Buying a futures contract is "opening a long position"; selling this contract afterwards is "closing a long position". On the other hand, short-selling a futures contract is "opening a short position"; buying this contract back afterwards is "closing a short position".
QDII	Qualified Domestic Institutional Investor. It is a scheme used by the Chinese government to allow some domestic financial institutions to invest in offshore markets in regulated ways.
QFII	Qualified Foreign Institutional Investor. A scheme used by the Chinese government to allow some foreign financial institutions to invest in domestic markets in regulated ways, such as forming joint ventures with domestic banks and brokerage firms.
rat trading	A dishonest practice of some brokers. When a rat-trading broker receives a trading order from a client, she uses her own account to

carry out the trade at the best timing (such as the lowest point to buy, or the highest point to sell). The she trades between her own account and the client's account at a less optimal price, pocketing the difference of prices.

settlement	To fulfil contractual obligations by payment in cash, or delivery of physicals.
spot	The commodity stock in the present time. "Spot price" and "futures price" are prices of the same commodity, deliverable at different times.
SHFE	Shanghai Futures Exchange (上海期貨交易所)
speculation	The buying and selling of assets in order to gain profits from the price fluctuations. Speculation is the exposure to more risks, in the hope of getting better profits. Speculators and hedgers are people who trade in futures for contrasting purposes.
ZCE	Zhengzhou Commodity Exchange (鄭州商品交易所)

Appendix 3 Notes on Logic Gates

When I was formulating this research in 2003-2004, I was scribbling on rough paper to sketch “digital logic devices”: triangles and half-circles that denote the logic components of AND, OR, and NOT used in electronics and computer science. By working out a logic formula and combining these “logic gates” into an electric circuit, an undergraduate engineering student would be able to produce a row of flashing Christmas lights, or a cardboard tank with simplistic remote control features.

It sounds peculiar to start a sociology thesis with tiny logic gates, but at that time I was fascinated by a science studies approach to see markets as huge logic arrays made up of humans and non-humans. Similar to digital circuits, the output signals of the markets (prices, news and trading volume) depend on the values of input signals, how the market agents are inter-connected, and the inherent logical properties of all the market agents (the “logic gates”). This approach can be traced back to relevant works in science studies include markets as experimental devices (Callon & Muniesa 2003); as a cyborg structure (Mirowski 2002); as a circuit of cognitive feedback loops (Barnes 1983); as a network of actors, power and artefacts (Hughes 1993); and as a feedback pathway between speech (knowledge) and social reality (see “performativists” in chapter 2). I have also written a previous dissertation on how the properties of “market arrays” were rapidly re-configured by public discourses in the dotcom bubble (Siu 2002). In the research proposal stage of this project, I went as far as drawing analogues between digital circuits with market derivatives.⁸³ I did not intend to build a simulation model in the form of digital circuits, but at an early stage a lot of attention was focused on configuration, feedback, and performativity.

⁸³ For example, a stock index is a circuit of weighted arithmetic averages; a call option is a conditional selection of two ways to calculate its value; and futures introduce a time delay component into the “circuit”.

Appendix 4 Synchronization

I had one auxiliary observation during fieldwork, which could also echo with social synchronization in the markets, and in the society in general. Amongst the futures people of China, the wide-spread application and discussion about *boyi* reflected the sensitivity of deciphering, synchronizing and pre-empting the movements of others. On public meetings and gatherings, most people in mainland China (compared with Hong Kong or the UK) tended to leave earlier before the official program really came to a close. During the seven months of fieldwork, I had witnessed the same phenomenon under different social settings: cinema screenings, a dolphin show in a theme park, a Sunday church service in a Protestant church, and a nightclub entertainment performance in city Q. As soon as the audience deciphered that the program was going to end quite soon – when the MC (master of ceremonies) of the dolphin show said “thank you for coming”, or when the priest started the Communion ritual on a Sunday service - the majority of the audience were leaving. Very often I found myself nearly the last one left behind with dolphins still jumping on the stage, the priest still saying a prayer, or the dancers still singing songs of farewell to the audience. I found that the general population of contemporary China was sensitive to synchronize with people around them, quick to grasp new movements, and reluctant to be “left behind” of anything. Such qualities were also part of the social embedding of markets.